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ABSTRACT

As part of the three-phase national study to provide information to form a basis for predictions about successful nursing performance, a review was conducted of the performance of nursing school graduates at their first jobs. In March, 1976, questionnaires were mailed to a cohort of 1975 graduates who were selected by school officials as having special ability and to a sample of graduates chosen at random. The 914 responding graduates were then asked to provide the names of their immediate superiors who were subsequently sent questionnaires requiring them to rate the graduates on the same activities on which the graduates had evaluated themselves. Based on the responses of these two groups, information was derived in the five following areas: (1) the relationship between the type of educational program and the graduate's type of employment, and the extent of congruence in job performance appraisal by the employer and graduate; (2) variables which influence choice of a particular educational program and a particular job; (3) motivational and other characteristics of graduates according to their prenursing background, present position and performance, and future aspirations; (4) extra-job professional activities of the graduates; and (5) differential perceptions of quality of basic education relative to present performance. (EIG)

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# Prediction of Successful Nursing Performance

## PART III AND PART IV

HEALTH MANPOWER REFERENCES

DHEW Publication No. HRA 79-15

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE ■ HEALTH RESOURCES ADMINISTRATION
BUREAU OF HEALTH MANPOWER ■ DIVISION OF NURSING
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The study upon which this publication is based was supported by Public Health Service contract number HRA NO1-NU-44127 from the Division of Nursing, Health Resources Administration.

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# FOREWORD

The determination of effective clinical performance in nursing, particularly with regard to the ability of basic professional schools to select, retain, and graduate new professionals whose level of competence is considered safe and effective by initial employers, is of vital interest to the Division of Nursing. Such a determination serves a major objective of the Division to increase the quality of nursing practice through continually improved preparation of the beginning practitioner.

In 1967 the Division supported a significant research effort that summarized the literature through 1965 dealing with student admission, selection, and retention procedures; that effort has served as a major reference on the state of the art to investigators working in the field. The first major task of the present study was to conduct a comprehensive review of the 1965-1975 literature relevant to academic and clinical selection and prediction criteria in nursing that could serve as a reference for researchers and educators, and suggest areas for future research.

The second task was to develop, test, and administer a questionnaire to a representative sample of all basic professional schools of nursing to obtain information on (1) adequacy and use of known criteria for predicting successful nursing performance; (2) alternative criteria which the schools consider to be promising; (3) operational definitions of successful and effective nursing performance; and (4) identification of a cohort of 1975 graduating students considered to be highly effective performers. These students, and a randomly selected group of non-nominated graduates of the same school, were then followed up on the job early in 1976 to determine the relative effectiveness of school prediction criteria for later performance on the job. The information provided by the 151 participating schools and the results of the literature review are reported in a Division publication entitled *Prediction of Successful Nursing Performance, Part I and Part II* (DHEW Publication No. HRA 77-27).

This publication reports the results of phase three of the study, which followed up the nurse graduates' performance on the job, and presents in a final, supplemental report, some in-depth analyses of certain portions of the data useful to the Division for policymaking.

This study was carried out by the Ohio State University Research Foundation under the able direction of Dr. Patricia Schwirian. We hope the findings from the literature review and from the survey will assist others in approaching the difficult problem of prediction.

Jessie M. Scott

JESSIE M. SCOTT
Assistant Surgeon General
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## ACKNOWLEDGMENTS

To all the nurse graduate and supervisor respondents, I give my greatest thanks. In our zeal to do the best possible data collection job, my staff and I developed a questionnaire of formidable proportions, and we well realize the time, effort, and interest that all our respondents so graciously gave to our endeavor. I want to thank all of the staff and all those who served as research associates over the course of the project: Jane Heffernan, Sue Basta, Jean Larabee, Foye Shellhorn, Charold Baer, Ann Yersavich, and Rosemary Jones. I also express my appreciation to the staff of the Division of Computing Sciences of the Ohio State University College of Medicine, and to my faculty colleagues and administrators in the School of Nursing who provided much collegial support. Finally, deepest gratitude to Dr. Susan R. Gortner, our project officer, whose support, creativity, and enthusiasm was unfailing.

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## Part III

# EVALUATION AND PREDICTION OF THE PERFORMANCE OF RECENT NURSE GRADUATES

# I. BACKGROUND AND SCOPE OF THE TOTAL STUDY

Nurses constitute one of the largest single groups of practicing professionals in the health care delivery system. Moreover, they bear the primary responsibility for the direct care of clients in almost all health subsytems. Therefore, the assurance of the highest possible quality of preparation and performance for members of this vital health profession is essential. The Division of Nursing of the Department of Health, Education, and Welfare, in its continuing commitment to the assurance of such quality, has conducted and supported a wide range of educational and research endeavors for nurses, nurse educators, and nurse researchers. In 1974 the Division of Nursing determined that there was a need for a national study focused on three primary goals: "(1) to reassess the state of the art on the prediction of nursing clinical performance; (2) to obtain current information from nursing educational programs about prediction criteria in use by them; and (3) to evaluate the relative merits of the schools' predictive criteria through the review of the actual performance of graduates of these schools in the first job after graduation."[1] Subsequently, a contract was issued by the Division of Nursing, and it was awarded to the Ohio State University Research Foundation for execution of the study, Prediction of Successful Nursing Performance. This research effort was initiated in June 1974 and was conducted in three general phases corresponding to the three primary goals of the Division of Nursing contract.

Phase 1 of the study was a comprehensive critical review of the 1965-1975 research literature related to the identification and utilization of predictors of nursing success. "Prediction of Successful Nursing Performance, Part I: A Review of Research Related to the Prediction of Successful Nursing Performance, 1965-1975," is a summary of the major findings and trends in the reviewed literature. The report also includes an extensive annotated bibliography and recommendations for future research efforts of potential promise.

Phase 2 of the study was the development and administration of a mailed questionnaire to a stratified random sample of 10 percent of all State-accredited basic professional schools of nursing in the United States. These data provided information on: (1) the adequacy and use of known criteria for predicting successful performance in nursing school; (2) alternative predictive criteria considered promising by the schools; (3) the operational definitions of "a successful nurse" and of "effective nursing performance"; and (4) a cohort of students who graduated in spring 1975, who were considered by their school administrators and/or faculty to have the most potential for being successful in nursing practice. The description and analysis of those findings are reported in "Prediction of Successful Nursing Performance, Part II: Admission Practices, Evaluation Strategies and Performance Prediction Among Schools of Nursing." Both this report and the report of Phase 1 are published in one volume by the Division of Nursing under the title: *Prediction of Successful Nursing Performance. Part I and Part II.* (DHEW Publication No. HRA 77-27).

Phase 3 of the study was the development and administration of mailed questionnaires to the spring 1975 graduates who had been selected by the schools which had participated in phase 2. The sample of 1975 nurse graduates who were identified as potential respondents for phase 3 were selected in two ways: (1) nomination by their school administration/faculty as "promising" and "most promising" among the graduates; and (2) random selection by the research project staff from the entire list of graduates of each school's spring 1975 graduating class. The goal of phase 3 was to ascertain the relative success of the selected nurse graduates. Success was ascertained via self-appraisals provided by the nurse graduates and performance appraisals provided by the graduates' immediate superiors. The major

[1] U.S. Department of Health, Education, and Welfare, Public Health Service, Division of Nursing. "SF-83 Supporting Statement: Prediction of Successful Nursing Performance" (Washington, D.C.), p. 2.

sources of input for the development of the graduate and employer questionnaires were from the literature review done in phase 1 and from the responses of the participating schools of nursing in phase 2 of the study.

The participating nurse graduates provided extensive data regarding their basic demographic characteristics, prenursing and nursing education, employment since graduation from nursing school, professional plans and aspirations, and appraisals of their own performance as nurses. The responding graduates were asked to identify their immediate superior and give permission to ask that person to participate in the study. The participating immediate superiors provided some basic data regarding their demographic characteristics and professional backgrounds, and appraisals of the performance of the nurse graduates who had identified them as their immediate superior.

The performance appraisal data were then analyzed and compared with the "success predictions" of the 1975 nurse graduates which had been made by the schools' administrators and/or faculty in phase 2 of the study. The results, as reported here in Part III, describe the conduct and findings of the final phase (phase 3) of the study.

In March 1977 a report of the general findings of the study (particularly those from phase 3) were presented by the Project Director to members of the Division of Nursing staff and several invited nurse administrators and educators from the Washington, D.C. area. In a smaller meeting following that presentation, it was determined that the Division—for purposes of policy planning—needed some in-depth analyses of certain portions of the data which had been gathered and described as part of the original scope of work of the contract. Subsequently a supplemental agreement was developed describing the modified scope of work which would encompass the conduct of the secondary analysis required to meet the information requirements of the Division. The results of that analysis are presented here as Part IV.

The purpose of this last report is to address five question areas of interest to the Division. We wished to determine:

1. the relationship between the type of educational program and the utilization of the graduate on the job, and the extent of congruence in job performance appraisal by employer and newly employed graduates;
2. variables which influence choice of a particular educational program and a particular job;
3. motivational and other characteristics of graduates according to their prenursing perceptions and background, their present position and performance, and their future professional educational and employment aspirations;
4. the extra-job professional activities among recent graduates, and the relationship of such activities with prediction categories; and
5. differential perceptions of quality of basic education relative to present performance.

# II. THE NURSE GRADUATES

## Response Rates of Nurse Graduate Sample

The data in tables 1-4[1] show the distribution of response rates among the sampled nurse graduates according to four stratifying characteristics: type of nursing program from which they graduated, geographic region, nomination status, and type of financial support for the school from which they graduated.

A total of 914 nurse graduates returned usable questionnaires, producing an overall response rate of 30.4 percent. There were significant differences in response rates according to school type, region, and nomination status, but no difference by type of financing; graduates from associate degree programs had a significantly lower rate of response than either diploma or baccalaureate nurse graduates. Higher percentages of responses were obtained from the West and Midwest than from the North Atlantic and South regions. (See list of regions below.) The response rate was highest among those graduates who had been nominated by the administrators/faculty of their schools as most promising (35 percent); it was somewhat lower among those who had been nominated as promising (31 percent); and it was the lowest (26 percent) among those who had not been nominated by their schools but had been randomly selected by the project staff from the schools' 1975 graduate class lists. Henceforth these groups will be referred to as most promising, promising, and nonselected.

### Regions as Defined by the National League for Nursing

**Region I, North Atlantic**

| | | |
|---|---|---|
| Connecticut | Massachusetts | Pennsylvania |
| Delaware | New Hampshire | Rhode Island |
| District of Columbia | New Jersey | Vermont |
| Maine | New York | |

**Region II, Midwest**

| | | |
|---|---|---|
| Illinois | Michigan | North Dakota |
| Indiana | Minnesota | Ohio |
| Iowa | Missouri | South Dakota |
| Kansas | Nebraska | Wisconsin |

**Region III, South**

| | | |
|---|---|---|
| Alabama | Louisiana | South Carolina |
| Arkansas | Maryland | Tennessee |
| Canal Zone | Mississippi | Texas |
| Florida | North Carolina | Virgin Islands |
| Georgia | Oklahoma | Virginia |
| Kentucky | Puerto Rico | West Virginia |

**Region IV, West**

| | | |
|---|---|---|
| Alaska | Guam | New Mexico |
| American Samoa | Hawaii | Oregon |
| Arizona | Idaho | Utah |
| California | Montana | Washington |
| Colorado | Nevada | Wyoming |

[1] See tables in section V.

## Demographic Characteristics of Responding Nurse Graduates

The data in tables 5-9 describe the basic demographic characteristics of the sample of 1975 graduates from the 151 basic schools of nursing in the United States which participated in the study. The group of graduates was overwhelmingly female (92 percent, table 5) and between 21 and 25 years of age (75 percent, table 6). About half were married and half were single (table 7); more than three-fourths had no children (table 8). More than 95 percent of the respondents were white, and 3 percent were black (table 9).

In order to determine the general nature of the graduates' socioeconomic backgrounds, they were asked to describe the occupation and education of their parents and their spouses (tables 10-15). Table 10 data show that more than half of the graduates' mothers were homemakers when the respondent attended high school. Of those mothers who were employed outside the home most held positions in the clerical occupations (13 percent) or semiskilled and unskilled labor (10 percent). Only about 5 percent were engaged in health professions — including nursing. Likewise, table 11 data indicate that very few of the respondents' fathers were employed as health professionals (<5 percent). The largest single occupational group was proprietor/manager/supervisor (19 percent), followed by semiskilled or unskilled labor (17 percent), skilled labor (14 percent), and non-health professionals (12 percent). As shown in table 13, the modal level of educational achievement among the respondents' mothers was graduation from high school (35 percent); another 30 percent of the mothers had taken some work beyond high school and about 10 percent had earned a baccalaureate degree or higher. For fathers (table 14) the modal educational level was graduation from high school (27 percent); about 2 percent of the fathers had taken post-high school work; and over 22 percent had earned baccalaureate degrees or higher. In general, both the occupational and educational status of the respondents' fathers were somewhat higher than those of their mothers.

Tables 12 and 15 show that, for those 434 nurse graduates who were married, the indicators of socioeconomic status for their spouses are considerably higher than for their parents. The largest single occupational group among spouses (table 12) was the non-health professionals (18 percent). The categories of skilled labor, proprietor/manager/supervisor, and student each had about 11 percent. The modal educational level among spouses (table 15) was the baccalaureate degree (31 percent); another 37 percent of the spouses had taken work beyond the high school diploma; and more than 13 percent held degrees beyond the baccalaureate level.

## Educational Background and Performance of Nurse Graduates

Important elements which nursing students or graduates bring to their nursing education and subsequently to their nursing practice are their preceptions, skills, attitudes, and knowledge obtained during prior educational experiences. Tables 16-21 contain data related to the prenursing educational backgrounds of the nurse graduates in this study. Table 16 shows that the graduates were relatively evenly distributed in their origins from rural areas, smaller towns, and suburban areas (20 percent, 30 percent, and 34 percent, respectively). The smallest group (14 percent) came from large cities. Table 17 shows that less than one-third of the respondents had graduated in high school classes of fewer than 100, and about the same proportion had graduated in high school classes of more than 300.

Two indicators of prior academic achievement obtained from the recent nurse graduates were: rank in their high school graduating class and their final grade point average earned in nursing school. The data in table 18 show that more than three-fourths of the respondents ranked in the upper quarter of their high school graduating classes; in fact, 46 percent ranked in the top 10 percent. The data in table 19 indicate that this substantial level of academic achievement was maintained throughout nursing school since almost 75 percent of the respondents had graduated with a final cumulative grade point average (GPA) of 3.00 or better, based on a value of 4.00 for an A. Almost a third had achieved a final GPA of between 3.50 and 4.00. The interpretor of these data, however, should be reminded that, in keeping with the overall goal of the project, (to ascertain the relative success of the 1975 graduates consid-

ered by their school administrators/faculty to have the most potential for being successful in nursing practice) the sample was overloaded with those graduates nominated as promising and most promising. It should also be pointed out that by far the most often cited criterion for the nomination of the promising and most promising graduates was academic achievement in nursing school.[2]

While the majority of the respondents (63 percent) participated in continuous education through their most recently completed basic degree in nursing (e.g., high school, to college prenursing courses to baccalaureate nursing program; or high school followed immediately by entry into a diploma school of nursing) many respondents experienced a more interrupted educational pattern in terms of the completion of their highest level of nursing education. The data describing these educational patterns are shown in table 20. The "interim" educational institutions most commonly attended were colleges in which the students were enrolled in programs other than nursing programs (22 percent) and community colleges (17 percent). Almost 13 percent of the respondents had studied nursing as a major, and more than 15 percent had studied in other specific vocational areas. For almost 30 percent, the interrupted educational period was between 6 months and 2 years duration. Slightly more than 12 percent of the respondents obtained some sort of certificate or diploma before they entered their most recent nursing program, and 8 percent reported that they held academic degrees.

The last measure of achievement obtained from the responding nurse graduates was the set of performance scores on State Board Test Pool Examinations (SBTPE). While the actual purpose of these examinations is not the measurement of a graduate's academic achievement, but rather to serve as criteria whereby nurse graduates may or may not be registered to practice nursing, numerous studies have regularly shown positive significant relationships between SBTPE scores and a wide variety of other measures of prior academic achievement. The data in table 21 show the distribution of the 1975 nurse graduate respondents in three SBTPE score categories: scores of less than 400, scores of 400 through 599 and scores of 600 and higher. In the earlier nursing school phase (phase 2) of this study, the 151 participating schools were asked to provide the SBTPE scores (by categories) of their 1974 graduates. A comparison of the SBTPE data in table 21 from the sample of 1975 nurse graduates and the 1974 graduate SBTPE data obtained from the schools show that, among the 1975 graduates there were proportionately fewer in the "less than 400" category and more in the "600 or higher" category.[3] This difference, however, is consistent with our intentional "over sampling" of the graduates considered promising and most promising by their nursing faculty and/or administration. The nominations from the schools were most often based on the graduates' academic achievement in nursing school so, given the usual high positive correlation between nursing school grades and SBTPE performance, the differences between the two distributions (table 21 of this report and table 20 of the Part II report) would be expected.[4] In general, among this sample of 1975 nurse graduates approximately 5 percent obtained scores of less than 400, about 60 percent scored between 400 and 600, and approximately 35 percent obtained scores of 600 and higher.

## Career Selection Decisions and Nursing School Experience

In order to develop a more complete picture of the experiences which the graduate nurses in the sample brought with them to their practice of the profession, questions included in the questionnaire sought information about their backgrounds which was not necessarily demographic nor related to prior academic performance, but nonetheless an important component of "who they were" when they became nurses. These questions, included in section III of the Graduates' Self-Appraisal questionnaire (see form in appendix B), had to do with their decisions to become nurses and some of their experiences while they were in nursing education programs.

The age at which the respondents said they decided to become nurses is the subject of the data presented in table 22. This variable has

[2] Patricia M. Schwirian, *Prediction of Successful Nursing Performance, Part I and Part II.* "Part II, Admission Practices, Evaluation Strategies and Performance Prediction Among Schools of Nursing." DHEW Publication No. HRA 77-27, Health Resources Administration, Division of Nursing, 1978.

[3] Ibid.

[4] Ibid.

been incorporated in a number of other studies of nursing students and those who intended to become nursing students. As noted in the literature review summary which was the initial phase of this project, the decision to become a nurse usually has been made at an earlier normative age than the career decisions of aspirants to other occupations.[5] The data in table 22 show that about one-quarter of the respondents decided to enter nursing even before they entered high school, almost 40 percent made this decision in high school, and more than one-third were relatively "late deciders"; i.e., more than 18 years of age. Compared to other studies that have included career decision age as a variable, the group of respondents in this study contained considerably more "late deciders" than reported by other investigators. Two alternative interpretations of these observed differences can be made: first, the prior studies focused on "beginners" or aspirants to nursing education, whereas the respondents in this study were "completers" of that process. At least one author would suggest that this observed difference was the result of a higher dropout rate among the "early deciders" because of disillusionment with "real nursing" that did not correspond to their immature over-idealized image of nursing which prompted them to make a too-early career decision; the alternative interpretation is that since the data from earlier studies were collected, more effective counseling has occurred in secondary and higher education, thereby informing students in general of a broader range of professional opportunities and resulting in their making their career decisions at a more mature phase in their lives.

The respondents were also asked to describe their reasons for choosing to enter nursing as a career. The data in table 23 show that the most common responses were to be of "service to others" and because of "personal interest and satisfaction." This relatively altruistic motivation to enter nursing has been reported by many researchers and is usually expected to be expressed by aspirants to the profession in general. Unlike the findings reported in some earlier studies, relatively few respondents (less than 10 percent) cited the influence of others as a significant motivational factor in their career choice. This could be reasonably expected in this group of respondents since the parents of relatively few of the respondents were employed in health occupations (tables 10 and 11), and parents are usually acknowledged to be the most influential contributor to a young person's career choice. More than 20 percent of the respondents cited the economic stability of the profession as a significant motivator; the appeal of the combination of marriage-family-career because of the potential flexibility of nurses' working hours was included in this motivational category.

While it was not anticipated that there would be a great deal of variability in nurse graduates' stated motivation for entering nursing, it was hypothesized that the reasons they would give for choosing the type of nursing program they attended (i.e., AD, diploma, or baccalaureate) would vary by school type. The data in table 24 show that this was the case. The graduates from associate programs were predominated almost entirely in their choice of school type by factors of the short length of program, relatively lower cost of becoming a nurse, and the geographic proximity to their homes; less than 12 percent of the baccalaureate graduates cited these factors as major considerations in their selection of a baccalaureate program. Diploma graduates cited program quality most often as their basis for choosing that type of program (54 percent) and about a third indicated that time and cost had been important factors. The graduates from baccalaureate programs responded to this question in an entirely different way; reasons related to career advancement and opportunities were given most often (75 percent). The concerns that were classified in this group included, among others: the belief that baccalaureate graduates would probably get better jobs and advancements; that a bachelor's degree is, in itself, desirable for one who wishes to compete successfully in any job market; and the idea that eventually the baccalaureate degree in nursing will be the basic professional degree, and they wanted to be prepared for that eventuality. The only other reason for choosing a baccalaureate program which was given by any sizable number of baccalaureate graduates was the quality of the nursing program (28 percent).

Participating nurse graduates were also asked to give the reason(s) they had selected the

[5] Patricia M. Schwirian, *Prediction of Successful Nursing Performance, Part I and Part II.* "Part I: A Review of Research Related to Successful Nursing Performance, 1965-1975," DHEW Publication No. HRA 77-27, Health Resources Administration, Division of Nursing, 1978.

particular nursing school they attended. Reasons of expediency and geographic proximity still remained uppermost with the AD graduates, as shown in table 25, with geographic proximity being the overriding consideration (71 percent). Diploma graduates also considered nearness to home as an important factor in deciding which particular diploma school they would attend; the recommendations of others had also been an important choice factor for a quarter of the diploma graduates. It may be seen also in table 25 that, apparently, once the baccalaureate graduates made their decision to "go baccalaureate," they, too, were significantly influenced in their decision of which particular school to attend by the factors of cost and geographic proximity—29 percent and 46 percent, respectively, stated those reasons.

While it would have been impractical (if not impossible) for all of the respondents to provide open-ended narratives about their nursing education experiences, it was judged important to know what they perceived as the relative strengths and weaknesses of their preparation for nursing from the perspective of having already been in practice approximately one year. The responses to these questions were categorized and the distribution of categories of strengths and weaknesses by school type are shown in tables 26 and 27. The most marked between-school-type contrast of graduates' opinions regarding the strengths and weaknesses of their nursing preparation was in the area of clinical experience. Almost half the diploma graduates cited this as one of the strongest features of their nursing education and almost half of the graduates from AD and baccalaureate schools perceived it to be the weakest aspect of their educational experience. The most commonly cited program strength cited by AD graduates was the quality of course content (22 percent) and the baccalaureate graduates' most common responses were the broad knowledge base acquired in their programs (22 percent) and the quality of course content (18 percent). It is interesting to note that very few (less than 4 percent) of any of the schools' graduates cited leadership development as a program strength.

An inspection of the data in tables 26 and 27 shows that apparently there were very mixed opinions among the AD graduates and the baccalaureate graduates regarding the quality of course content; approximately the same percentage of respondents from both of these types of schools viewed the quality of course content as the schools' weak point, as had judged it the strong point in the preceding question. Course content was viewed as a program weakness by even more diploma graduates (36 percent); this was the only weakness mentioned by any sizable number of diploma graduates. It is also apparent that the baccalaureate graduates perceived deficiencies in their education for technical skills; 20 percent mentioned this area as a program weakness. Ten percent of the AD graduates identified technical skills as a weak preparation area while less than 3 percent of the diploma graduates did so.

When graduates were asked to give their suggestions for improvements in the nursing education program they had attended, their suggestions, as shown in table 28, displayed a high level of congruence with their perceptions of program strong points and weak points. AD and baccalaureate graduates suggested more clinical experience (47 percent and 45 percent, respectively) and about 15 percent of each of those two groups recommended improved course content. Interestingly, while more than a third of the diploma graduates (table 27) had identified course content as a program weakness, less than 6 percent (table 28) suggested its improvement when given the opportunity. A sizable proportion (approximately 15 percent) of each group was of the opinion that the programs from which they had graduated would benefit by an upgrading of the school faculty.

As a summary of the respondents' satisfaction or dissatisfaction with their nursing education institution and program, they were asked whether, if they had it to do over again, they would choose the same type of program and if they would choose the same nursing school. The data in table 29 show that about three-fourths of the respondents answered affirmatively to both questions. The patterns of satisfaction, however, differed by type of program: the highest percentage of graduates expressing satisfaction with their choice of program was among the baccalaureate graduates (95 percent); the lowest percentage was among the graduates of AD programs (64 percent). The reasons most commonly given by those students who would repeat their school program choice, if given the opportunity were: program quality and career

advancement among baccalaureate and diploma graduates, and career advancement and expediency (i.e., factors of time, money, and location) among the AD graduates. The most common reasons given by those graduates who said they would have chosen a different type of program were more limited career opportunities cited by AD and diploma graduates, and program quality which was cited by AD graduates.

It has been suggested by a number of observers and researchers (and already mentioned in this section) that the ideas of nursing which are held by young aspirants to the profession undergo a marked change as the young man or woman encounters the realities of nursing school and nursing practice. In order to examine this contention and its possible relation to the performance of recent nurse graduates, the respondents were asked what their ideas of nursing had been prior to entering nursing school, if their ideas had subsequently changed, and if so, how had they changed. The responses to these open-ended questions (section III, items 9, 10, and 11 on the Nurse Graduate Self-Appraisal Questionnaire) were classified and coded by the project staff. The tabulation of these categorized responses are included in tables 30 and 31. Almost a third of the respondents described their prenursing school images of nursing primarily in terms of being a profession, the central mission of which was service to others; almost 10 percent said they perceived nursing as a dignified profession; about 12 percent classified their image as romanticized and/or idealistic. Slightly more than 5 percent reported that their idea of the nurse was that of acting as an assistant to the physician; 4 percent said they thought that nursing would be hard work; 3 percent thought it would be easy work.

Did the respondents perceive that their idea of nursing had changed since their prenursing school days? Sixty percent said they had changed; 35 percent said they had not changed, and 5 percent gave no information on the topic. In order to determine the nature of the idea changes that had occurred, the responses were classified by type of current image and whether these changes would be construed as positive, negative, or neutral in affect. The data in table 31 are presented in this format. The most commonly cited positive changes in the graduates' ideas of nursing were that they now perceived the practice of nursing in terms of nursing process constructs and the professional components of nurse functions. The most commonly mentioned negative idea change was that nursing practice has many more responsibilities and much heavier workloads than they had ever imagined before they entered the field.

It was of interest to determine the graduates' level of participation in various extracurricular experiences while they attended nursing school, so they were asked to cite their employment experiences and their participation in professionally related organizations during this period. These data are shown in tables 32 and 33. Well over two-thirds of the respondents had worked at some time during nursing school. The most common work experiences were in nursing-related jobs; 32 percent had experience as attendants, and 18 percent had worked as nursing assistants. The most common working experiences in non-health-related jobs were those in service (11.4 percent). The participation of respondents in nursing-related organizations is shown in table 33. Well over a third of the respondents had been members of the Student Nurse Association of their schools; among those participants about one-fourth had held at least one elected office in the organization.

## Employment

The data in table 34 show that 84 percent of the nurse graduate respondents in this study were employed full time in nursing and another 8 percent were employed in nursing on a part-time basis, when they provided these data. What of those who were not employed in nursing? The data in table 35 show that among the 73 respondents who were not currently employed in nursing, the most common reasons given were: that they were students at the current time (32 percent), they were unable because of family responsibilities (29 percent), they were presently seeking employment (22 percent), and they were in the process of moving from their present location (18 percent).

The data obtained regarding the temporal patterns of these nurse graduates are not presented in tabular form in this report; however, in general, these respondents started working soon after graduation and have maintained relatively stable employment patterns. A majority of the new graduates (74 percent) began working at their present job within the

same year that they graduated, i.e., 1975. Almost half (49 percent) of the new graduates began working during the months of June, July, and August, with 29 percent of these during the month of June; 9 percent waited until 1976 to begin working in their present jobs and 1 percent had been working in their present jobs, prior to graduation from nursing school. This 1 percent of these graduates were probably individuals who had already obtained nursing licensure through an LPN, AD, or diploma nursing program; some of them had been in their present positions as early as 1964.

The data in tables 36, 37, and 38 describe the employing agencies, work sites, and nursing areas in which the respondents were employed. Slightly more than three-fourths of all the respondents were employed in hospitals; this actually represents 83 percent of the respondents who were employed in nursing. Among those 696 nurse graduates employed in hospitals, the data in table 37 show that more than half (57 percent) were in general care units, 23 percent worked in inpatient critical care settings (e.g., ICU or CCU), and 5 percent were employed in emergency room care areas. It is notable that more than 35 percent of these recent graduates were employed in specialized nursing care areas which tend to be high stress settings.

Respondents (hospital-employed) were also asked to describe their clinical area of nursing function. Most classified their clinical area as medical nursing, surgical nursing, or a combination thereof (21 percent, 19 percent, and 32 percent, respectively). Slightly more than 11 percent of the hospital nurses identified pediatric nursing as their clinical area; other respondents were scattered sparsely through areas of obstetrics, psychiatry, geriatrics, etc.

All respondents were asked to indicate the type of position they held. Table 39 shows that an overwhelming majority (81 percent) were staff nurses; however, almost 7 percent of the recent graduates held positions of some administrative type; i.e., head nurse, assistant head nurse, or supervisor. The working time patterns of the responding nurse graduates (table 40) showed rather equal distribution among the hospital shift patterns, and more than one-third reported that "some weekends" were part of their working schedule. Respondents were asked to indicate their annual salary in terms of the salary ranges indicated on table 41. More than 15 percent of the nurse graduates were earning less than $8,000, one-third were earning between $8,000 and $9,999; another third were earning between $10,000 and $11,999, and less than 9 percent were earning $12,000 or more.

The reasons that the nurse graduates gave for having chosen their current jobs in nursing are shown in table 42. Respondents could check as many reasons as were applicable to them. The most commonly stated reasons for their job choice were: that they felt they could benefit from the additional learning experience which the job provided (17 percent); that the job provided an opportunity to utilize their education and abilities (15 percent); that the position corresponded to their clinical area of choice (14 percent); that the job provided favorable working conditions (12 percent); and that the salary was good (9 percent).

A common concern expressed by employers of nurses is the pattern of job-changing which is usually considered disruptive to the efficient operation of their health care service. Moreover, it could be hypothesized that the wish or intent to change jobs could affect a nurse's performance. Consequently the respondents were asked to indicate their response to: "I plan to stay in my current job until I find a job . . . ." The data from that question are shown in table 43. Almost 30 percent of the respondents simply stated that they had no intention of changing jobs; this was, in fact, the most common response given by these recent nurse graduates. The job conditions most often cited as being those for which respondents would move from their current jobs were: better working hours (25 percent), a chance for advancement (21 percent), more professional independence (19 percent), working in one's clinical area of preference (19 percent), higher salary (18 percent), better working conditions (15 percent), and a better location (14 percent). It is notable that three of the top four reasons for job movement could be described as relatively professional motivations (advancement, professional independence, and area of clinical choice) rather than work setting types of reasons (e.g., salary, hours, or location).

Respondents were asked in an open-ended question to describe their "plans concerning practicing nursing in the future." Their re-

sponses were categorized and the compiled data are shown in table 44. Almost half the nurse graduates stated intentions of continuing their nursing education; 40 percent planned to continue in nursing with no significant change in practice area; and 26 percent intended to continue to practice nursing but change their practice area in some way. Only 3 percent indicated an intention to leave nursing practice permanently and 3 percent planned to leave practice temporarily.

## Professional Activities and Plans

It is generally acknowledged in professions that one's basic education is only a foundation for beginning safe practice, and that one must continue his/her education in order to "keep up" with current developments and improvements in professional practice. Continued education is also one expected component of the credentialization of individuals for assuming professional positions of greater skill, leadership, and status. Therefore, it was of interest to know the activities and intentions of our nurse graduates in terms of their own continuing education efforts. Tables 45 and 46 show that while their first year's educational activities were limited, their educational intentions were admirable. About 16 percent of the respondents had earned academic credits in their first postgraduation year; of these only about a third had earned credits in nursing subject matter. Almost 17 percent of the graduates had participated in educational programs for which they earned Continuing Education Units (CEU's) and more than one-quarter (29 percent) had participated in noncredit educational programs. Almost two-thirds of the work they did for CEU's and in noncredit programs focused on nursing subject matter.

After a year in practice there was a high level of expressed interest among the respondents in continuing their education as expressed by the intent to earn additional degrees or certificates. Among the AD and diploma graduates, nearly 60 percent said they intended to continue for a baccalaureate degree in nursing, and about 15 percent of each group said they planned to obtain a nonnursing baccalaureate degree. The intent to earn a master's degree in nursing was expressed by 72 percent of the baccalaureate graduates, 15 percent of the AD graduates, and 11 percent of the diploma graduates. Baccalaureate graduates were also quite interested in the nurse practitioner programs (30 percent), and 5 percent reported that they planned to pursue a doctoral degree in nursing. The data in table 47 show the respondents' reasons for pursuing additional education; professional advancement and/or professional enrichment were given as motivating factors by 39 percent of the respondents. Only about 11 percent felt that obtaining an additional degree was actually a professional necessity, of these, 8+ percent were diploma graduates and 2+ percent were AD graduates.

Membership in professional organizations is shown in table 48. Almost 40 percent of first-year graduates held membership in at least one professional nursing organization — usually the ANA (23 percent). The level of participation was generally limited to attendance at meetings (23 percent); only 2 percent reported that they held office in any of their professional organizations. A second professional activity examined was the respondents' readership patterns of professional publications (table 49). Almost a third of the graduates read *Nursing '76* from cover to cover; half that many said they read the *American Journal of Nursing (AJN)* and *RN* from cover to cover. The more common reading pattern for the *AJN* was to read articles of interest (reported by half the respondents). *Nursing '76* was also read in this style by a sizable number of respondents (35 percent). More than 15 percent of the graduates said they read articles of interest in medical journals. Finally, the graduates were asked to describe their professional participation in terms of presentations or publications they had contributed since graduation (see table 50). Most had not made such contributions; 15 percent said they had. The reported activites were most commonly workshops (10 percent) and speeches (5 percent); articles had been written by less than 25 percent of the group.

## Comparisons of Selected Variables by School Type, Geographic Region, and Nomination Status

*School Type.* – Table 51 shows the comparisons of graduates of AD programs, diploma programs, and baccalaureate nursing programs on 18 different variables. The AD graduate group contained more older (over 25) and younger (under 21) members, more males, more married

and formerly married respondents, and more respondents with children than the diploma and baccalaureate graduate groups. The socioeconomic status of baccalaureate graduates, both in terms of the occupation/education level of both fathers and spouses, was highest as was their academic standing in their high school graduating classes. Participating graduates from diploma schools had achieved higher SBTPE scores in the area of pediatric nursing.

Significantly more AD graduates had made their decision to enter nursing after the age of 18, and fewer AD graduates were employed full time in nursing a year after graduating More baccalaureate nurses were employed in government facilities (usually the military) and public health. Diploma graduates had the highest rate of employment as staff nurses, and baccalaureate graduates earned the highest salaries. Baccalaureate graduates expressed the most interest in continuing their nursing education (62 percent); diploma graduates expressed the least interest (35 percent). Baccalaureate graduates reported a higher incidence of membership and participation in professional nursing organizations than did AD or diploma graduates.

*Geographic Region.* — Table 52 shows the comparison of 18 different variables by the geographic region in which the respondent's nursing school was located. Several demographic characteristics differed significantly by geographic region. The largest group of "under 21" respondents graduated from schools in the North Atlantic region; the largest group of "over 25" graduates came from schools in the South and West regions. The highest proportions of nonwhites (7 percent) were in the South and West. The marital status data showed that the South region had the fewest single respondents (30 percent). The data for occupation and education of respondents' fathers and spouses show significantly different regional patterns but those differences vary in such a way that one may not identify any general regional patterns regarding general socioeconomic status differences among respondents.

There were no between-region differentes in the high school standing of the respondents. The respondents from the South and North Atlantic regions reported lower SBTPE scores in pediatric, obstetrical, and psychiatric nursing. The highest proportions of "late deciders" came from the South and West (43 percent and 45 percent, respectively), and the lowest proportion of full-time employment in nursing (75 percent) was observed among the respondents in the West region.

The highest proportion of respondents employed in hospitals came from the Midwest (84 percent). Graduates of schools in the West earned the highest salaries. There appeared to be little regional variation in respondents' plans to continue their nursing education or their membership and participation in professional nursing organizations.

*Nomination Status.* — Table 53 shows the comparison of 18 different variables by the respondent's nomination status. The only demographic characteristic on which significant differences were observed between "most promising," "promising," and "nonselected" nurse graduates was marital status 1 year after graduation. The most promising were also the "most married." Patterns of fathers' occupations also differed, but the differences formed no definable pattern.

By contrast, significant differences in indicators of academic achievement were observed in a consistent pattern. Most promising graduates reported higher high school class standing and higher SBTPE scores in all of the five test areas. The nonselected respondents had the lowest scores on these variables. More "most promising" graduates also reported having made their nursing career decisions after 18 years of age. Patterns of current employment status are generally the same, and there were no significant salary differences among the three nomination status groups.

The "most promising" and "promising" respondents expressed more interest in continuing their nursing education (56 percent) for most promising, 49 percent for promising, and 37 percent for nonselected), and they reported a consistently higher incidence of membership and participation in professional nursing organizations.

## Performance of Nurse Graduates

A list of 76 nurse behaviors, developed by the project staff as a means of operationalizing and measuring nurse performance, was actually the heart of the questionnaire sent to each participant.

The responding nurse graduates were asked three questions about each of the behaviors: how often they performed the behavior in their current job (*frequency of performance*), how well they performed the behavior in their current job (*self-evaluation of performance*), and how well their nursing school had prepared them for the activity (*quality of preparation*). Each of these three areas was ranked on a 1-4 scale.

The development of the items and the subsequent data analysis applied to generate the six performance subscales are described in detail in the methodology portion (appendix A) of this report. Briefly stated, the responses from the nurse graduates and their supervisors were subjected to principal components analysis; the factor structures were very similar and therefore they were used as the basis for defining six performance subscales of varying length. This reduced the original 76 items to a condensed 52-item version. These six performance subscales are Leadership (5 items), Critical Care (7 items), Teaching/Collaboration (11 items), Planning/Evaluation (7 items), Interpersonal Relations/Communication (hereafter referred to as IPR/Communication) (12 items), and Professional Development (10 items).

The mean frequency ratings given by the nurse graduates to each item and each performance scale (except Professional Development) are shown in table 54.

The data in table 55 show the mean self-appraisal scores the graduates gave themselves on each of 42 nurse performance items; the mean scores for each of the 5 subscales are also shown. The procedure which was used to select these items as the best ones among the 66 items on the original questionnaire (see appendix B) is described in the methodology (appendix A) of this report. The graduates perceived their strongest performance areas to be Interpersonal Relation/Communication and Leadership; the area with the lowest mean self-appraisal is Teaching/Collaboration.

Tables 56, 57, and 58 show comparisons of graduates' self-appraisal of performance by school type, region, and nomination status. Table 56 shows that on all the nurse behavior performance scales except Professional Development, graduates from AD schools gave themselves lower self-ratings than respondents from either diploma or baccalaureate schools. Diploma graduates rated themselves higher in the areas of Leadership, Critical Care, and IPR/Communications. Baccalaureate graduates rated their performance in the areas of Teaching/Collaboration and Planning/Evaluation significantly higher than graduates from the two other types of schools. There were no significant differences by school type in the self-appraisals of graduates on the Professional Development scale. It is interesting to note that graduates from all three types of schools gave their highest mean performance self-appraisals in the areas of IPR/Communication and Leadership.

The data in table 57 show that there was a significant difference in self-appraisals by geographic region on only one performance scale. The nurse graduates from the North Atlantic and West regions had higher mean self-appraisal ratings on the Planning/Evaluation scale. Otherwise, there were no notable differences in the self-appraisals of graduates in the four geographic regions.

As shown in table 58, in general, the nurse graduates who were selected by their nursing school administrator/faculty as "promising" and "most promising" did not rate their performance more highly that the "nonselected" respondents from the classes. The exception was that those graduates selected as "promising" and "most promising" gave themselves selected higher self-appraisals on the Professional Development behaviors than the nonselected graduates gave themselves.

The data in table 59 show the mean rating scores that the graduates assigned to the quality of the preparation they received in their schools of nursing for performing each of the behaviors which were presented. They perceived their strongest areas of preparation to be in Planning/Evaluation and IPR/Communications ($\bar{X}$s = 3.41 and 3.38, respectively); the area of preparation which was perceived to be weakest was Critical Care ($\bar{X}$ = 2.96).

The data in tables 60, 61, and 62 show that the patterns of the responding nurse graduates' perceptions of the quality of preparation for nursing were very similar to their patterns of perceptions of the quality of their own performance a year after graduation. In fact, it should be noted here that correlation coefficients (Pearson r) between self-appraisal ratings and ratings of quality of nursing school preparation were all statistically significant (p .001). The

values were: Leadership, r = 0.424; Critical Care, r = 0.426; Teaching/Collaboration, r= 0.516; Planning/Evaluation, r = 0.426; and IPR/Communication, r = 0.556. The comparison of perceived quality of preparation by school type in table 60 shows that with the exception of one area — Critical Care — graduates from AD programs gave lower mean ratings than graduates from diploma and baccalaureate schools; the baccalaureate graduates' ratings of preparation in that area were the lowest. The highest mean ratings of the quality of nursing school preparation were given by the diploma graduates on all five performance scales.

Tables 61 and 62 data show that there were no significant differences in mean nursing school preparation ratings either by geographic region or the nomination status of the responding nurse graduates.

# III. THE EMPLOYERS

## Introduction

In addition to the nurse graduates' self-appraisal of their on-the-job performance and other relevant variables, it was considered necessary to obtain an evaluation of the graduates' performance from an immediate superior in the employment setting. Therefore, the participating nurse graduates were asked to provide the name of the individual best able to evaluate their performance as well as the name and address of the Director of Nursing (or the equivalent, if the employer was not a hospital). The Employer Appraisal of Nurse Graduate form was sent to each director, who, in turn, was asked to pass it on for completion, to the evaluator identified by the nurse graduate.

A substantial number of the responding nurse graduates (84.7 percent) complied with the request to provide the name of their immediate superior. Therefore, 774 Employer Appraisal forms were sent to directors; of these, a total of 687 usable questionnaires were returned (88.8 percent) from the immediate superiors identified by each graduate. The individuals who provided the employer data occupied a variety of positions (e.g., head nurse, supervisor, assistant head nurse, etc.), but for the sake of brevity the evaluators will be referred to as "supervisors" in the remainder of this report even though they may not have had that specific job title.

## Demographics, Education, and Employment

The data descriptive of various background characteristics of the 687 supervisor respondents to the Employer Appraisal of Nursing Graduate questionnaire are shown in tables 63-70. Since the main focus during phase 3 of this study was on the recent graduates, only very basic data were obtained about the supervisor who evaluated the graduate's performance. Like the nurse graduates, the supervisors were almost always women (96 percent), as shown in table 63. The age range of the supervisors was fairly wide; table 64 shows that more than 40 percent were less than 35 years old, 28 percent were between age 35 and 44, and 20 percent were between 45 and 54 years of age.

The basic nursing preparation of three-fourths of the supervisors had been in diploma programs (table 65), and 13 percent had received their basic nursing education in baccalaureate programs. A comparison of the data in tables 65 and 66 indicate that, of those 513 supervisor respondents whose basic preparation was in a diploma school, 97 had continued their nursing education to obtain academic degrees in nursing. At the time of the survey, 6 percent of the supervisors held master's degrees, 18 percent held a baccalaureate degree in nursing as their highest degree, and for 61 percent the diploma was the highest level of nursing education they had completed. The data in table 67 show that nearly 30 percent of the responding supervisors completed their most recent nursing education program more than 20 years ago; about 20 percent were in the 6- to 10-year category, and about 20 percent in the 11- to 20-year category; another 20 had completed their most recent program within the last 5 years.

As shown in table 68, more than 45 percent of the respondents, whom the nurse graduates had identified as the immediate superior most able to evaluate their performance, held positions of head nurse or assistant head nurse; almost 30 percent were supervisors; and 12 percent were directors of nursing or assistant directors of nursing where the nurse graduates worked. Unlike the nurse graduates whose pattern of working hours were generally "spread around" among the work shift options, the supervisors most commonly worked days (72 percent); about 8 percent each worked evenings, nights, or were on rotation. These data are shown in table 69. The data in table 70 show that over 60 percent of the supervisors had been employed in their current health care agency more than 5 years; 37 percent of these more than 10 years. Tables 71-73 show data relating to the length of time the supervisor had known and supervised the graduate, and had direct responsibility for evaluating the graduate's performance.

## Supervisors' Appraisals of Nurse Graduates' Performance

Tables 74 and 75 show the supervisors' mean ratings of the frequency and quality of performance of the nurse graduates. A comparison of the mean frequency ratings for the five performance scales in table 74 indicates that supervisors gave the highest frequency ratings to items in the IPR/Communication scale ($\overline{X} = 4.52$) and the lowest rating to behaviors in the Teaching/Collaboration scale ($\overline{X} = 3.53$). They rated the graduates' quality of performance highest in the areas of IPR/Communication ($\overline{X} = 3.09$), and Critical Care ($\overline{X} = 3.06$), and performance quality lowest in the area of Teaching/Collaboration ($\overline{X} = 2.70$).

*Comparison by School Type.* — The data in table 76 show that, in general, supervisors did not evaluate the performace of graduates of AD, diploma, and baccalaureate programs differently. There were significant differences on only two of six scales; in the area of Teaching/Collaboration and Planning/Evaluation the supervisors rated the performance of baccalaureate graduates higher than that of graduates from AD and diploma programs. It should be recalled that diploma graduates (table 56) rated their own performance in all areas significantly higher than did AD graduates, and baccalaureate graduates rated their performance in Teaching/Collaboration and Planning/Evaluation significantly higher than did respondents in the other two groups.

*Comparisons by Geographic Region.* — The comparison of supervisors' mean scale ratings of the nurse graduates' performance by geographic region is shown in table 77. On three scales (Leadership, Teaching/Collaboration, and IPR/Communication) supervisors in the South and West gave higher ratings to the graduates they evaluated. The Midwest supervisors consistently gave the lowest mean scale ratings.

*Comparisons by Nomination Status.* — The data in table 78 show that in all six performance scales the supervisors rated highest the performance of the graduates nominated as "most promising"; and they rated lowest the performance of the "nonselected" graduates. Moreover, on five of the six scales the differences among ratings were statistically significant at the .05 level or beyond. The data in table 79 show that when the "most promising" and "promising" respondents are combined into a single "selected" group, the differences between the scores of selected and nonselected nurse groups are significant on all six performance scales. Thus, it appears that while the nurse graduates in each of the three nomination categories did not rate their own performance differentially (table 58), their supervisors did; and the supervisor ratings corresponded to the "predictions of success" which had been made by the administrators/faculty of the nurse graduates' alma maters.

# IV. SUMMARY

## Background

In 1974, the Division of Nursing of the Department of Health, Education, and Welfare determined that there was a need for a national study to accomplish three major objectives: (1) to critically review the literature of the past 10 years relative to academic and clinical nursing performance; (2) to obtain current information from basic professional schools of nursing about prediction criteria in use by them; and (3) to evaluate the relative merits of these predictors for subsequent performance of the schools' graduates on the job. A request for proposals was issued and a contract subsequently was awarded to The Ohio State University Research Foundation for execution of the study, Prediction of Successful Nursing Performance. Dr. Patricia M. Schwirian, Associate Professor of Nursing, The Ohio State University, was the project director and Dr. Susan Gortner, Nursing Research Branch Chief, the project officer.

Phase 1 of the study was a comprehensive review of the 1965-1975 research literature on academic and clinical prediction and has resulted in a report entitled "Prediction of Successful Nursing Performance Part I: A Review of Research Related to Prediction of Nursing Performance, 1965-1975." This report summarizes major findings and trends, includes an extensive annotated bibliography, and contains recommendations for future research efforts.

Phases 2 and 3 were the two major data-collection phases of the study. The first data-collection phase was based on a questionnaire mailed in July 1975 to a random sample of 151 basic schools of nursing in the United States, stratified according to type of program, control, and region. Obtained in this survey were the following: use of known criteria for predicting successful nursing performance; identification of other criteria considered helpful in prediction; operational definitions of successful and effective nursing performance; and identification of a cohort of 1975 graduates considered to be promising with regard to their nursing performance. Through judgments made by the Dean or Director in consultation with the faculty, a cohort of 25 percent of the graduating class was selected. This cohort also included a "most promising" subset of graduates. In addition, responding schools provided class lists so that a 20 percent random sample of the entire 1975 graduating class could be drawn for comparison.

These selected graduates and the random sample of the entire graduating class were contacted in March 1976 by a second mailed questionnaire. This questionnaire obtained students' perceptions of the frequency and adequacy of their performance of a series of nursing activities described in the questionnaire, and their evaluation of educational preparation for these activities. The 914 responding graduates were asked to provide the names and addresses of the immediate superior in their work settings. These immediate superiors were subsequently sent questionnaires in which they also were asked to rate the new nurse graduates' performances on the same set of activities on which the graduates had evaluated themselves.

## Phase Findings: Evaluation and Prediction of the Performance of Recent Nursing Graduates

- The overall response rate among selected graduates was 30.4 percent. Response rates were highest among baccalaureate and diploma graduates (33 percent and 32 percent, respectively), among graduates in the West and Midwest (34 percent and 32 percent), and among the graduates who had been nominated as most promising (35 percent). The resulting respondent group consisted of 342 AD graduates, 332 diploma graduates, and 240 baccalaureate graduates (total N = 914).
- Ninety-two percent of the graduates were female, three-fourths were between 21 and 25 years old, half were married, 76 percent had no children, 95 percent were white, and the socioeconomic background of their families was typically "middle-middle class."
- The graduates were generally a very

academically able group. Over three-fourths had graduated within the top 25 percent of their high school class and had obtained a final nursing school GPA of "B" or better.

- Almost all respondents (92 percent) were employed in nursing; 83 percent of those employed in nursing worked in hospitals.
- The most commonly given reason for choice of program by AD graduates was factors of expediency, e.g., time, cost, and location (65 percent). Diploma graduates most often cited program quality (54 percent). Baccalaureate graduates most often cited career advancement and opportunities (75 percent). Overall, 74 percent of the graduates reported they would have chosen the same type of school again, but with widely varying response between school types (95 percent for baccalaureates, 69 percent for diplomas, and 64 percent for ADs).
- The major reasons given for choosing their current jobs were that they could benefit from the additional learning experience (17 percent) and that it was an opportunity to use their education and abilities. The most commonly cited reasons for changing a job were an opportunity for better working hours, a chance for advancement, more professional independence, and the opportunity to work in their clinical area of choice.
- The future plans for practicing nursing indicated that 66 percent plan to continue their nursing education. Sixty-six percent intended to continue in nursing; only 3 percent intended to leave nursing practice permanently.
- Among the graduates employed as hospital nurses (N = 696), 57 percent worked in general care units and one-third were employed in high stress environments, such as ICU, CCU, ER, and OR.
- Comparison of characteristics by nomination status indicated no significant differences according to age, sex, race, family socioeconomic status, salary, or their employment. Those nominated as most promising graduates had obtained highest high school rank, highest State Board exam scores, and were more likely to have decided after the age of 18 to enter nursing.
- A principal components analysis of the 66 nursing behavior items on the graduate and employer questionnaires resulted in a five-subscale assessment appraisal instrument. These scales were named IPR/Communication, Leadership, Critical Care, Planning Care, and Teaching/Collaboration. The sixth scale, called Professional Development, was also used as a performance appraisal measure.
- Graduates rated their own behaviors most highly on the IPR/Communication and Leadership subscales (3.19 and 3.10, respectively, based on a rating scale of 1-4). They rated themselves lowest on the Teaching/Collaboration scale (2.64).
- Comparison by school type: AD graduates rated themselves lower than diploma and baccalaureate graduates on all six scales. Diploma graduates rated themselves higher than AD and baccalaureate graduates in Leadership, Critical Care, and IPR/Communication. Baccalaureate graduates rated themselves higher than AD and diploma graduates in Teaching/Collaboration and Planning Care.
- Supervisors of the responding graduates were also asked to evaluate the graduates' performances (N = 687). Ninety-six percent of these supervisors were female and 75 percent had received their basic preparation in nursing in diploma schools.
- Comparison of the performance ratings from the supervisors and those from the graduates showed the most notable differences in the areas of IPR/Communication, Critical Care, and Leadership. Supervisors rated graduates' performance in Critical Care higher than the graduates had rated themselves. Supervisors rated the graduates lower in the areas of IPR/Communication and, most notably, Leadership, than the graduates had rated themselves.
- Comparison of supervisors' evaluations of graduates' performance by school type showed significant differences on two of the six scales. Baccalaureate graduates were rated significantly higher on Teaching/Collaboration and Planning Care scales.
- Comparison of supervisors' evaluations by nomination status showed graduates nominated as "most promising" had the highest mean ratings on all six scales; graduates who had not been selected had the lowest

mean ratings on all six scales. Differences were statistically significant on all scales except IPR/Communication.

Secondary analysis of the data, which will serve various policy needs of the Division, were conducted during the late spring and summer of 1977. This secondary analysis constitutes phase 4 of the entire project.

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# V. TABLES

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**Table 1. — Nurse graduate response rate by type of nursing program**

| Type of program | Sample | Respondents | Percent of response |
|---|---|---|---|
| Associate degree | 1,248 | 342 | 27.4 |
| Diploma | 1,037 | 332 | 32.0 |
| Baccalaureate | 719 | 240 | 33.4 |
| Totals | 3,004 | 914 | |

**Table 2. — Nurse graduate response rate by geographic region[1]**

| Region | Sample | Respondents | Percent of response |
|---|---|---|---|
| North Atlantic | 818 | 230 | 28.1 |
| Midwest | 959 | 311 | 32.4 |
| South | 799 | 227 | 28.4 |
| West | 428 | 146 | 34.1 |
| Totals | 3,004 | 914 | |

[1] Response rate from total sample = 30.4 percent.
$X^2 = 8.16$
df = 3
$p < .05$

**Table 3. — Nurse graduate response rate by school nomination status[1]**

| Nomination status | Sample | Prespond-ents | Percent of response |
|---|---|---|---|
| Most promising | 923 | 327 | 35.4 |
| Promising | 981 | 306 | 31.2 |
| Nonselected | 1,100 | 281 | 25.5 |
| Totals | 3,004 | 914 | |

[1] Response rate from total sample = 30.4 percent.
$X^2 = 23.56$
df = 2
$p < .001$

**Table 4. — Nurse graduate response rate by school financial support[1]**

| Support | Sample | Respond-ents | Percent of response |
|---|---|---|---|
| Public | 1,611 | 472 | 29.3 |
| Private | 1,393 | 442 | 31.7 |
| Totals | 3,004 | 914 | |

[1] Response rate from total sample = 30.4 percent.
$x^2 = 2.09$
df = 1
p n

**Table 5. Nurse graduates: distribution by sex**

| Sex | Number | Percent |
|---|---|---|
| Female | 839 | 91.8 |
| Male | 61 | 06.7 |
| No response | 14 | 01.5 |
| Total | 914 | 100.0 |

**Table 6. — Nurse graduates: distribution by age**

| Age | Number | Percent |
|---|---|---|
| Under 21 years | 56 | 06.1 |
| 21 - 25 years | 687 | 75.2 |
| 26 - 35 years | 80 | 08.8 |
| Over 35 years | 82 | 08.9 |
| No response | 9 | 00.9 |
| Total | 914 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 7. — Nurse graduates: distribution by marital status**

| Marital status | Number | Percent |
|---|---|---|
| Single | 430 | 47.0 |
| Married | 422 | 46.2 |
| Widowed | 7 | 00.8 |
| Separated | 9 | 01.0 |
| Divorced | 36 | 03.9 |
| No response | 10 | 01.1 |
| Total | 914 | 100.0 |

**Table 8. — Distribution by the number who have children within designated age range categories[1]**

| Age range of children | Number | Percent |
|---|---|---|
| Expecting | 23 | 02.5 |
| Under 6 years | 84 | 09.2 |
| 6-12 years | 98 | 10.7 |
| 13-18 years | 73 | 08.0 |
| Over 18 years | 49 | 05.4 |
| No response/ no children | 699 | 76.4 |

[1] A graduate could have more than one response in any age range category.

**Table 9. — Nurse graduates: distribution by race and ethnic origin**

| Race | | Number | Percent |
|---|---|---|---|
| American Indian/Alaskan Native | | 5 | 00.5 |
| Asian or Pacific Islander | | 4 | 00.4 |
| Negro/Black | | 27 | 03.0 |
| Hispanic | = 1 | | |
| Non-Hispanic | = 26 | | |
| Caucasian/White | | 871 | 95.3 |
| Hispanic | = 15 | | |
| Non-Hispanic | = 856 | | |
| No response | | 7 | 00.8 |
| Total | | 914 | 100.0 |

**Table 10. — Nurse graduates: distribution by spouse's occupation**

| Spouse's occupation | Number | Percent |
|---|---|---|
| Nurse/physician | 24 | 5.5 |
| Other health professionals | 11 | 2.5 |
| Other professionals | 79 | 18.2 |
| Technical occupations | 35 | 8.1 |
| Farmer | 16 | 3.7 |
| Proprietor/manager/supervisor | 46 | 10.6 |
| Skilled labor | 48 | 11.0 |
| Semi or unskilled labor | 34 | 7.8 |
| Clerical occupations | 18 | 4.1 |
| Sales occupations | 20 | 4.6 |
| Public service/military | 37 | 8.5 |
| Student | 47 | 10.8 |
| Homemaker | 9 | 2.1 |
| Unemployed | 6 | 1.2 |
| Retired | 2 | .5 |
| Deceased | 2 | .5 |
| Total | 434 | 100.0 |

**Table 11. — Nurse graduates: distribution by mother's occupation while respondent was attending high school**

| Mother's occupation | Number | Percent |
|---|---|---|
| Nurse/physician | 41 | 4.5 |
| Other health professionals | 3 | .3 |
| Other professionals | 51 | 5.6 |
| Technical occupations | 43 | 4.7 |
| Manager/supervisor/proprietor | 16 | 1.7 |
| Skilled labor | 19 | 2.1 |
| Semi and unskilled labor | 88 | 9.6 |
| Clerical occupations | 123 | 13.4 |
| Sales occupations | 11 | 1.2 |
| Public service/military | 7 | .8 |
| Student | 3 | .3 |
| Homemaker | 474 | 51.8 |
| Unemployed | 0 | - |
| Retired | 0 | - |
| Deceased | 14 | 1.5 |
| No response | 21 | 2.3 |
| Total | 914 | 100.0 |

**Table 12. — Nurse graduates: distribution by father's occupation while the respondent was attending high school**

| Father's occupation | Number | Percent |
|---|---|---|
| Physician/nurse | 26 | 2.8 |
| Other health professionals | 15 | 1.6 |
| Other professionals | 106 | 11.6 |
| Technical occupations | 37 | 4.0 |
| Farmer | 85 | 9.3 |
| Proprietor/manager/supervisor | 177 | 19.4 |
| Skilled labor | 128 | 14.0 |
| Semi or unskilled labor | 151 | 16.5 |
| Clerical occupations | 19 | 2.1 |
| Sales occupations | 46 | 5.0 |
| Public/military service | 59 | 6.4 |
| Student | 0 | - |
| Unemployed | 7 | .8 |
| Retired | 5 | .5 |
| Deceased | 29 | 3.2 |
| No response | 24 | 2.6 |
| Total | 914 | 100.0 |

**Table 13. — Nurse graduates: distribution by mother's highest level of education**

| Mother's highest level of education | Number | Percent |
|---|---|---|
| Elementary school | 81 | 08.9 |
| Some high school | 125 | 13.7 |
| High school graduate | 323 | 35.3 |
| Post-high school studies (no certificate or diploma) | 150 | 16.4 |
| Post-high school certificate, diploma, or associate degree | 124 | 13.6 |
| Baccalaureate degree | 78 | 08.5 |
| Master's degree | 16 | 01.8 |
| Doctoral degree | 0 | - |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 3 | 00.3 |
| No response | 14 | 01.5 |
| Total | 914 | 100.0 |

**Table 14. — Nurse graduates: distribution by father's highest level of education**

| Father's highest level of education | Number | Percent |
|---|---|---|
| Elementary school | 128 | 14.0 |
| Some high school | 143 | 15.6 |
| High school graduate | 249 | 27.2 |
| Post-high school studies (no certificate or diploma) | 130 | 14.2 |
| Post high school certificate, diploma, or associate degree | 52 | 05.7 |
| Baccalaureate degree | 98 | 10.7 |

**Table 14. — Nurse graduates: distribution by father's highest level of education — Continued**

| Father's highest level of education | Number | Percent |
|---|---|---|
| Master's degree | 41 | 04.5 |
| Doctoral degree | 5 | 00.5 |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 54 | 05.9 |
| No response | 14 | 01.5 |
| Total | 914 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 15. — Nurse graduates: distribution by spouse's highest level of education**

| Spouse's highest level of education | Number | Percent |
|---|---|---|
| Elementary school | 5 | 1.1 |
| Some high school | 10 | 2.3 |
| High school graduate | 66 | 15.0 |
| Post-high school studies (no certificate or diploma) | 89 | 20.2 |
| Post-high school certificate, diploma, or associate degree | 73 | 16.6 |
| Baccalaureate degree | 138 | 31.4 |
| Master's degree | 36 | 8.2 |
| Doctoral degree | 4 | .9 |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 19 | 4.3 |
| | 440 | 100.0 |

**Table 16. — Nurse graduates: distribution by type of community of residence while attending high school**

| Community type | Number | Percent |
|---|---|---|
| Rural or farm | 183 | 20.0 |
| Town or small city (not near large city) | 271 | 29.6 |
| Suburban area (near a large city) | 312 | 34.1 |
| Large city | 129 | 14.1 |
| No response | 19 | 02.1 |
| Total | 914 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 17. — Nurse graduates: distribution by size of high school graduating class**

| High school class size | Number | Percent |
|---|---|---|
| Under 50 | 98 | 10.7 |
| 50 - 100 | 181 | 19.8 |
| 100 - 300 | 330 | 36.1 |
| Over 300 | 286 | 31.3 |
| No response | 19 | 02.1 |
| Total | 914 | 100.0 |

**Table 18. — Nurse graduates: distribution by rank in high school graduating class**

| High school class rank | Number | Percent |
|---|---|---|
| In the upper 10 percent | 420 | 45.9 |
| In the upper 25 percent | 287 | 31.4 |
| In the upper 50 percent | 145 | 15.9 |
| In the lower 50 percent | 32 | 03.5 |
| No response | 30 | 03.3 |
| Total | 914 | 100.0 |

**Table 19. — Nurse graduates: distribution by final nursing school grade point average (based on A = 4.0, B = 3.0, C = 2.0)**

| Final nursing school grade point average | Number | Percent |
|---|---|---|
| 2.00 - 2.49 | 33 | 03.6 |
| 2.50 - 2.99 | 146 | 16.0 |
| 3.00 - 3.49 | 372 | 40.7 |
| 3.50 - 4.00 | 297 | 32.5 |
| No response | 66 | 07.2 |
| Total | 914 | 100.0 |

**Table 20. — Nurse graduates: distribution by post-high school education or training prior to their highest level of nursing education**

| Components of post-high school education | Number | Percent |
|---|---|---|
| Post-high school education: | | |
| No | 576 | 63.0 |
| Yes | [1]338 | 36.9 |
| Type of institution attended: | | |
| College | 198 | 21.6 |
| Community college | 152 | 16.6 |
| Hospital | 45 | 4.9 |
| Other | 17 | 1.8 |
| Major studied: | | |
| Nursing | 115 | 12.5 |
| AD = 2 | | |
| Diploma = 28 | | |
| Nonspecified = 26 | | |
| LPNs = 59 | | |
| Technical: Health (e.g., X-ray, laboratory, O.R.) | 32 | 3.5 |
| Technical: Non-health (e.g., beautician, barber, secretary, etc.) | 27 | 2.9 |
| Specific educational vocational courses (e.g., psychology, education, music) | 143 | 15.6 |
| General courses | 90 | 9.8 |
| Other | 3 | .3 |
| Duration of post-high school education: | | |
| Less than 1 month up to 6 months | 58 | 6.3 |
| Over 6 months up to 1 year | 151 | 16.5 |
| Over 1 year up to 2 years | 117 | 12.8 |
| Over 2 years up to 3 years | 36 | 3.9 |
| Over 3 years | 43 | 4.7 |

**Table 20. — Nurse graduates: distribution by post-high school education or training prior to their highest level of nursing education — Continued**

| Components of post-high school education | Number | Percent |
|---|---|---|
| Diploma, certificate, or degree earned: | | |
| No certificate earned | 218 | 23.8 |
| Certificate/diploma | 112 | 12.2 |
| Degree | 72 | 7.8 |
| Other | 4 | .4 |

[1] Of these 338, there were 75 graduates who attended more than 1 institution or type of educational program post-high school.

**Table 21. — Nurse graduates: distribution by performance in three score categories on State Board Test Pool Examinations**

| SBTP Examination | Less than 400 scores | | 400 through 599 scores | | 600 or higher scores | | Total |
|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. |
| Medical | 34 | 4.4 | 432 | 56.0 | 306 | 39.6 | 772 |
| Surgical | 31 | 4.0 | 444 | 57.5 | 297 | 38.5 | 772 |
| Obstetrics | 41 | 5.3 | 457 | 59.0 | 276 | 35.7 | 774 |
| Pediatrics | 39 | 5.0 | 461 | 59.6 | 273 | 35.3 | 773 |
| Psychiatric | 43 | 5.6 | 473 | 61.3 | 255 | 33.1 | 771 |

**Table 22. — Nurse graduates: distribution by age at which they decided to become a nurse**

| Age decided to become a nurse | Number | Percent |
|---|---|---|
| Under 10 years | 149 | 16.3 |
| 10-13 years | 94 | 10.3 |
| 14-15 years | 112 | 12.2 |
| 16-17 years | 228 | 24.9 |
| Over 18 years | 326 | 35.7 |
| No response | 5 | 00.5 |
| Total | 914 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 23. — Nurse graduates: distribution by reasons for entering nursing, in order of decreasing frequency**

| Reason for entering nursing | Number | Percent |
|---|---|---|
| Service to others | 442 | 48.3 |
| Personal interest/satisfaction | 414 | 45.2 |
| Economic stability of the profession | 195 | 21.3 |
| Substitute for medicine | 96 | 10.5 |
| Influence of others | 79 | 08.6 |
| Prior experience in health field | 66 | 07.2 |
| Interest in science | 40 | 04.3 |
| Religious motivation | 20 | 02.1 |
| Expediency (time, cost, and available facilities) | 12 | 01.3 |

[1] The graduates were not limited to a single response.

**Table 24. — Nurse graduates: distribution by their reasons for choosing the type of nursing programs they attended[1]**

| Reason for choice of type of nursing program | Associate degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Expediency (time and cost factors) | 222 | 64.9 | 109 | 32.8 | 20 | 8.3 | 351 | 38.4 |
| Geographic location | 118 | 34.5 | 25 | 7.5 | 8 | 3.3 | 151 | 16.5 |
| Recommendation of others | 10 | 2.9 | 33 | 9.9 | 13 | 5.4 | 56 | 06.1 |
| Quality of nursing program | 34 | 9.9 | 178 | 53.6 | 68 | 28.3 | 280 | 30.6 |
| Career advancement | 16 | 4.7 | 3 | 0.9 | 179 | 74.6 | 198 | 21.6 |
| Personal | 33 | 9.6 | 60 | 18.1 | 43 | 17.9 | 136 | 14.8 |
| Other | 1 | 0.3 | 1 | 0.3 | 5 | 2.1 | 7 | 0.7 |

[1] The graduates were not limited to a single response.

**Table 25. — Nurse graduates: distribution by their reasons for choosing the particular nursing school they attended[1]**

| Reason for choice of particular nursing school | Associate Degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Expediency (time and cost factors) | 109 | 31.9 | 62 | 18.7 | 69 | 28.8 | 240 | 26.2 |
| Geographic location | 242 | 70.8 | 133 | 40.1 | 110 | 45.8 | 485 | 53.1 |
| Recommendation of others | 38 | 11.1 | 85 | 25.6 | 36 | 15.0 | 159 | 17.4 |
| Quality of nursing program | 31 | 09.1 | 107 | 32.2 | 52 | 21.7 | 190 | 20.1 |
| Career advancement | 0 | 0 | 1 | 0.3 | 24 | 10.0 | 25 | 02.7 |
| Personal | 23 | 06.7 | 24 | 07.2 | 25 | 10.4 | 72 | 07.8 |
| Other | 4 | 01.2 | 1 | 0.3 | 5 | 02.1 | 10 | 01.0 |

[1] The graduates were not limited to a single response.

**Table 26. — Nurse graduates: distribution by opinions regarding the greatest strength of their nursing preparation, by school type[1]**

| Greatest strength of nursing preparation | Associate degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Clinical experience | 35 | 10.2 | 154 | 46.4 | 10 | 4.2 | 199 | 21.8 |
| Technical skills | 15 | 4.4 | 12 | 3.6 | 0 | 0 | 27 | 02.9 |
| Faculty | 42 | 12.3 | 28 | 8.4 | 20 | 8.3 | 90 | 09.8 |
| Teaching methods | 32 | 9.3 | 14 | 4.2 | 10 | 4.2 | 56 | 6.1 |
| Course content | 75 | 21.9 | 52 | 15.7 | 44 | 18.3 | 171 | 18.7 |
| Communication/IPR skills | 15 | 4.4 | 11 | 3.3 | 11 | 4.6 | 37 | 04.0 |
| Psychological orientation | 16 | 4.7 | 6 | 1.8 | 24 | 10.0 | 46 | 05.0 |
| Total patient orientation | 35 | 10.2 | 28 | 8.4 | 31 | 12.9 | 94 | 10.3 |
| Responsibility/confidence development | 27 | 7.9 | 117 | 5.1 | 25 | 10.4 | 69 | 07.5 |
| Leadership development | 2 | 0.6 | 11 | 3.3 | 9 | 3.7 | 22 | 02.4 |
| Individualism | 7 | 2.0 | 7 | 2.1 | 14 | 5.8 | 28 | 03.1 |
| Broad knowledge base | 32 | 9.3 | 20 | 6.0 | 53 | 22.0 | 105 | 11.5 |
| Professionalism/ethics | 5 | 1.5 | 5 | 1.5 | 11 | 04.6 | 21 | 02.3 |
| Other | 15 | 04.4 | 6 | 1.8 | 7 | 02.9 | 28 | 3.1 |
| No strengths | 4 | 01.2 | 1 | 0.3 | 2 | 0.8 | 7 | 0.7 |

[1] The graduates were not limited to a single response.

**Table 27. — Nurse graduates: distribution of opinions regarding the greatest weakness of their nursing preparation, by school type[1]**

| Greatest weakness of nursing preparation[2] | Associate degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Clinical experience | 160 | 46.8 | 26 | 07.8 | 111 | 46.2 | 297 | 32.4 |
| Technical skills | 35 | 10.2 | 8 | 02.4 | 48 | 20.0 | 91 | 09.9 |
| Faculty | 25 | 07.3 | 22 | 06.6 | 8 | 03.3 | 55 | 06.0 |
| Teaching methods | 17 | 04.9 | 23 | 06.9 | 13 | 05.4 | 53 | 05.7 |
| Course content | 72 | 21.0 | 121 | 36.4 | 43 | 17.9 | 236 | 25.8 |
| Communication/IPR skills | 0 | - | 0 | - | 0 | - | 0 | - |
| Psychological orientation | 1 | 0.3 | 6 | 01.8 | 0 | - | 7 | 0.7 |
| Total patient orientation | 1 | 0.3 | 0 | - | 0 | - | 1 | 0.1 |
| Responsibility/confidence development | 1 | 0.3 | 17 | 05.1 | 1 | 0.4 | 19 | 02.0 |
| Leadership development | 17 | 04.9 | 14 | 04.2 | 8 | 03.3 | 39 | 04.2 |
| Individualism | 0 | - | 2 | 0.6 | 1 | 0.4 | 3 | 0.3 |
| Knowledge base narrow | 1 | 0.3 | 15 | 04.5 | 0 | - | 16 | 01.7 |
| Knowledge base superficial | 20 | 05.8 | 8 | 02.4 | 3 | 01.2 | 31 | 03.3 |
| Social interaction | 0 | - | 5 | 01.5 | 0 | - | 5 | 0.5 |
| Professionalism/ethics | 1 | 0.3 | 0 | - | 0 | - | 1 | 0.1 |
| Credit for college | 0 | - | 20 | 06.0 | 0 | - | 20 | 02.1 |
| Other | 9 | 02.6 | 15 | 04.5 | 11 | 04.5 | 35 | 03.8 |
| No weaknesses | 0 | - | 12 | 03.6 | 1 | 0.4 | 13 | 01.4 |

[1] The graduates were not limited to a single response.
[2] Described as limited, insufficient, or inadequate.

**Table 28 — Nurse graduates: distribution by opinions regarding suggested improvements for their nursing school preparation, by school type**

| Suggested improvements for nursing school preparation | Associate degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| More clinical experience | 160 | 46.8 | 26 | 7.8 | 107 | 44.6 | 293 | 32.0 |
| Technical skills | 13 | 3.8 | 2 | 0.6 | 17 | 7.1 | 32 | 3.5 |
| More and better faculty | 45 | 13.1 | 47 | 14.1 | 37 | 15.4 | 129 | 14.1 |
| More effective teaching methods | 34 | 9.9 | 19 | 5.7 | 15 | 6.2 | 68 | 7.4 |
| Expanded course content | 43 | 12.6 | 60 | 18.0 | 39 | 16.2 | 142 | 15.5 |
| More program flexibility | 5 | 1.5 | 9 | 2.7 | 3 | 1.2 | 17 | 1.8 |
| Practical nursing | 12 | 3.5 | 0 | - | 2 | 0.8 | 14 | 1.5 |
| Total patient orientation | 0 | - | 2 | 0.6 | 1 | 0.4 | 3 | 0.3 |
| Instill more responsibility/confidence | 3 | 0.8 | 9 | 2.7 | 1 | 0.4 | 13 | 1.4 |
| More leadership content | 12 | 3.5 | 10 | 3.0 | 5 | 2.1 | 27 | 2.9 |
| Wider range of experiences | 4 | 1.2 | 12 | 3.6 | 0 | - | 16 | 1.7 |
| More realistic orientation | 2 | 0.6 | 5 | 1.5 | 3 | 1.2 | 10 | 1.1 |
| College credit | 0 | - | 15 | 4.5 | 0 | - | 15 | 1.6 |
| Other | 7 | 2.0 | 17 | 5.1 | 14 | 5.8 | 38 | 4.1 |
| No improvements needed | 2 | 0.6 | 8 | 2.4 | 2 | 0.8 | 12 | 1.3 |

**Table 29. — Nurse graduates: distribution by decision to choose same nursing school and same type of nursing program**

| Applicant's choice | A.D. (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Percent | No. | Percent | No. | Percent | No. | Percent |
| Same school | | | | | | | | |
| No | 96 | 28.0 | 65 | 19.5 | 33 | 13.7 | 194 | 21.2 |
| Yes | 234 | 68.4 | 262 | 78.9 | 196 | 81.6 | 692 | 75.7 |
| No response | 12 | 3.5 | 5 | 1.5 | 11 | 4.5 | 28 | 3.0 |
| Same program | | | | | | | | |
| No | 109 | 31.8 | 91 | 27.4 | 7 | 2.9 | 207 | 22.6 |
| Yes | 220 | 64.3 | 228 | 68.6 | 228 | 95.0 | 676 | 73.9 |
| No response | 13 | 3.8 | 13 | 3.9 | 5 | 2.0 | 31 | 3.3 |

**Table 30. — Nurse graduates: distribution by ideas of nursing prior to nursing school**

| Idea prior to nursing school | AD (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 99 | 28.9 | 119 | 35.8 | 59 | 24.6 | 277 | 30.3 |
| Dignified profession | 35 | 10.2 | 18 | 5.4 | 23 | 9.6 | 76 | 8.3 |
| Romantic ideal | 26 | 7.6 | 34 | 10.2 | 18 | 7.5 | 78 | 8.5 |
| Realistic | 40 | 11.7 | 18 | 5.4 | 9 | 3.7 | 67 | 7.3 |
| Hard work | 21 | 6.1 | 11 | 3.3 | 8 | 3.3 | 40 | 4.4 |
| Physician's assistant | 10 | 2.9 | 17 | 5.1 | 22 | 9.2 | 49 | 5.4 |
| Easy work | 7 | 2.0 | 8 | 2.4 | 8 | 3.3 | 23 | 2.5 |
| Limited professional scope | 6 | 1.7 | 13 | 3.9 | 19 | 7.9 | 38 | 4.2 |
| No idea | 26 | 7.6 | 34 | 10.2 | 30 | 12.5 | 90 | 9.8 |
| Idealistic | 12 | 3.5 | 14 | 4.2 | 10 | 4.2 | 36 | 3.9 |
| Economic security | 3 | .8 | 4 | 1.2 | 3 | 1.2 | 10 | 1.1 |
| Other | 16 | 4.7 | 13 | 3.9 | 5 | 2.1 | 34 | 3.7 |
| No response | 41 | 12.0 | 29 | 8.7 | 26 | 10.8 | 96 | 10.5 |

**Table 31 — Nurse graduates: distribution by current idea of nursing[1]**

| | Positive Change | | | | | | Neutral Change | | | | | | Negative change | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AD (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | AD (N=342) | | Diploma (N=332) | | Baccalaureate (N = 240) | | AD (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Nursing process | 13 | 3.8 | 24 | 7.2 | 55 | 22.9 | 1 | .3 | 4 | 1.2 | - | - | 9 | 2.6 | 4 | 1.2 | 2 | .8 | 112 | 12.2 |
| Responsibilities (work load) | 7 | 2.0 | 11 | 8.3 | 9 | 3.7 | 21 | 6.1 | 22 | 6.6 | 12 | 5.0 | 36 | 10.5 | 41 | 12.3 | 13 | 5.4 | 172 | 18.8 |
| Realistic components | - | - | 5 | 1.5 | 1 | .4 | 13 | 3.8 | 18 | 5.4 | 11 | 4.6 | 4 | 1.2 | 2 | .6 | 1 | .4 | 55 | 6.0 |
| Romantic image | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 1.5 | 12 | 3.6 | 4 | 1.7 | 21 | 2.3 |
| Porfessional components | 13 | 3.8 | 28 | 8.4 | 51 | 21.2 | 3 | .9 | - | - | 3 | 1.2 | 11 | 3.2 | 1 | .3 | 1 | .4 | 111 | 12.1 |
| Personal satisfaction | 20 | 5.8 | 9 | 2.7 | 11 | 4.6 | - | - | - | - | - | - | 3 | .9 | 1 | .3 | - | - | 44 | 4.8 |
| Patient and coworker interaction | 5 | 1.5 | 11 | 3.3 | 15 | 6.2 | - | - | - | - | - | - | 10 | 2.9 | 12 | 3.6 | 4 | 1.7 | 57 | 6.2 |
| Patient care | 20 | 5.8 | 18 | 5.4 | 17 | 7.1 | - | - | - | - | - | - | 8 | 2.3 | 4 | 1.2 | 5 | 2.1 | 72 | 7.9 |
| Working conditions | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 1.5 | 3 | .9 | 2 | .8 | 10 | 1.1 |
| Other ideas | - | - | 2 | .6 | 1 | .4 | 4 | 1.2 | 7 | 2.1 | 7 | 2.9 | - | - | 1 | .3 | 1 | .4 | 23 | 2.5 |

[1] 60.1 percent of all respondents stated that their idea of nursing had changed; 35.1 percent of all respondents stated that their idea of nursing had not changed; 4.8 percent of the respondents did not contribute information on this topic.

**Table 32. — Nurse graduates: distribution by type of employment during nursing school[1]**

| Type of employment | Number | Percent |
|---|---|---|
| Nursing related | 34 | 3.7 |
| Nursing assistant | 164 | 17.9 |
| LPN | 48 | 5.3 |
| Attendant | 295 | 32.3 |
| Other health related | 8 | 0.9 |
| Technician | 39 | 4.3 |
| Dental assistant | 2 | 0.2 |
| Medical secretary | 30 | 3.3 |
| Volunteer | 4 | 0.4 |
| Non-health related | 13 | 1.4 |
| Clerical | 69 | 7.5 |
| Sales | 24 | 2.6 |
| Service | 104 | 11.4 |
| Labor | 20 | 2.2 |
| Other | 16 | 1.8 |

[1] Nurse graduates may have held more than one type of position while in nursing school. Percentages are calculated on number of participants.

**Table 33. — Nurse graduates: distribution by membership in professional or student nurse organizations during nursing schools[1]**

| Organization | Number | Percent |
|---|---|---|
| Student Nurse Association | 341 | 37.3 |
| Student government | 29 | 3.2 |
| Honoraries | 21 | 2.3 |
| American Nurses' Association | 5 | 0.5 |
| Other | 5 | 0.5 |

[1] Nurse graduates may have been members of more than one student nurse organization. Percentages are calculated on number of participants.

**Table 34. — Nurse graduates: distribution by employment status[1]**

| Employment status | Number | Percent |
|---|---|---|
| Full time in nursing | 766 | 83.8 |
| Part time in nursing[2] | 77 | 8.4 |
| Non-nursing employment | 5 | 0.5 |
| Employed in nursing since graduation, but not presently | 42 | 4.6 |
| Not employed in nursing since graduation | 26 | 2.8 |

[1] Respondents were not limited to a single response.
[2] Sixteen of these respondents were simultaneously employed in two part-time nursing jobs.

**Table 35. — Nurse graduates: distribution by reasons given for not being currently employed in nursing, in order of decreasing frequency[1]**

| Reason | Number | Percent |
|---|---|---|
| Student | 23 | 88.5 |
| Family responsibilities | 21 | 80.8 |
| Presently seeking employment | 16 | 61.5 |
| In process of moving from present location | 13 | 50.0 |
| Health reasons | 12 | 46.2 |
| Employment opportunities limited/not available | 12 | 46.2 |
| Spouse prefers I do not work | 10 | 38.5 |
| Hours not suitable | 9 | 34.6 |
| Economic situation does not require it | 8 | 30.8 |
| Other | 7 | 26.9 |
| Hours and pay not adequate for effort made | 3 | 11.5 |
| I don't like nursing | 2 | 7.7 |
| Not type of practice I desire | 2 | 7.7 |
| Not within reasonable travel distance from nursing institution | 1 | 3.8 |

[1] Nurse graduates were not limited to a single response.

**Table 36. — Nurse graduates: distribution by type of employing agency**

| Agency | Number | Percent |
|---|---|---|
| Hospital | 696 | 76.1 |
| Long-term care facility | 16 | 1.8 |
| Government facility | 43 | 4.7 |
| Private clinic | 25 | 2.7 |
| Industry | 5 | 0.5 |
| Public health agency | 20 | 2.2 |
| School of nursing | 4 | 0.4 |
| School board | 3 | 0.3 |
| Unemployed | 26 | 2.8 |
| No response | 76 | 8.3 |
| Total | 914 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 37. — Nurse graduates: distribution by type of hospital worksite**

| Hospital worksite | Number | Percent |
|---|---|---|
| Inpatient | | |
| General units | 393 | 56.5 |
| Specialty care units | | |
| Intensive care unit | 88 | 12.6 |
| Cardiac care unit | 30 | 4.3 |
| Recovery room | 3 | 0.4 |
| Operating room | 30 | 4.3 |
| ICU/CCU | 38 | 5.5 |
| Nursery | 12 | 1.7 |
| Labor/Delivery | 14 | 2.0 |

**Table 37. — Nurse graduates: distribution by type of hospital worksite — Continued**

| Hospital worksite | Number | Percent |
|---|---|---|
| Outpatient | | |
| General | 2 | 0.3 |
| Emergency room (ER) | 35 | 5.0 |
| Administrative offices | 3 | 0.4 |
| Not specified | 48 | 6.9 |
| Total | 696 | 100.0 |

**Table 38. — Nurse graduates: distribution by type of hospital nursing area**

| Hospital nursing area | Number | Percent |
|---|---|---|
| Clinical areas | | |
| Medical | 144 | 20.7 |
| Surgical | 132 | 19.0 |
| Medical/surgical | 223 | 32.0 |
| Obstetrics | 42 | 6.0 |
| Psychiatric | 22 | 3.2 |
| Geriatric | 3 | 0.4 |
| Pediatric | 77 | 11.1 |
| Other | 14 | 2.0 |
| Administrative | 2 | 0.3 |
| Teaching | 4 | 0.6 |
| Not specified | 33 | 4.7 |
| Total | 696 | 100.0 |

**Table 39. — Nurse graduates: distribution by types of positions held**

| Position held | Number | Percent |
|---|---|---|
| Staff nurse | 738 | 80.7 |
| Private duty nurse | 3 | .3 |
| Assistant head nurse | 13 | 1.4 |
| Head nurse | 34 | 3.7 |
| Supervisor | 13 | 1.4 |
| Instructor | 9 | 1.0 |
| Other | 8 | .9 |
| No response | 96 | 10.5 |
| Total | 914 | 100.0 |

**Table 40. — Nurse graduates: distribution by working time patterns[1]**

| Working time patterns | Number | Percent |
|---|---|---|
| Day | 255 | 16.0 |
| Evening | 220 | 13.8 |
| Night | 156 | 9.8 |
| Rotating | 299 | 18.8 |
| Hours flexible and self-determined | 36 | 2.3 |
| Some weekends | 587 | 36.9 |
| On call | 26 | 1.6 |
| Other | 12 | .7 |

[1] Nurse graduates were not limited to a single response. Percentages are calculated on number of participants.

**Table 41. — Nurse graduates: distribution by current annual salary ranges**

| Annual salary range | Number | Percent |
|---|---|---|
| Under $6,000 | 50 | 5.5 |
| $6,000 - 7,999 | 97 | 10.6 |
| $8,000 - 9,999 | 303 | 33.2 |
| 10,000 - 11,999 | 294 | 32.2 |
| 12,000 - 14,999 | 69 | 7.5 |
| $15,000 - 16,999 | 3 | .3 |
| $17,000 and above | 6 | .7 |
| No response | 92 | 10.0 |
| Total | 914 | 100.0 |

**Table 42. — Nurse graduates: distribution by reasons for choice of nursing position[1]**

| Reason for choice of nursing position | Number | Percent |
|---|---|---|
| Clinical area of choice | 455 | 14.3 |
| Benefit from additional learning experience | 526 | 16.6 |
| Salary good | 290 | 9.1 |
| Chance for advancement | 120 | 3.8 |
| Fringe benefits | 209 | 6.6 |
| Favorable working conditions | 383 | 12.1 |
| Utilize education and abilities | 478 | 15.1 |
| Only job available | 84 | 2.6 |
| Limited to locality | 137 | 4.3 |
| Needed the money | 106 | 3.3 |
| Preparation for another job | 120 | 3.8 |
| Transportation convenience | 218 | 6.9 |
| Other | 46 | 1.4 |

[1] Nurse graduates were not limited to a single response. Percentages are calculated on number of participants.

**Table 43. — Nurse graduates: distribution, by response, of choices of circumstances for leaving current job[1]**

| Response | Number | Percent |
|---|---|---|
| I plan to stay in my current job until I find a job: | | |
| with more individual status | 104 | 11.4 |
| with higher salary | 161 | 17.6 |
| with better working hours | 225 | 24.6 |
| with chance for advancement | 193 | 21.1 |
| with better working conditions | 136 | 14.9 |
| with more professional independence | 176 | 19.2 |
| outside of the nursing field | 10 | 1.1 |
| in a better location | 131 | 14.3 |
| in the clinical area I prefer | 170 | 18.6 |
| with wide variety of experience | 19 | 2.1 |

**Table 43. — Nurse graduates: distribution, by response, of choices of circumstances for leaving current job[1] — Continued**

| Response | Number | Percent |
|---|---|---|
| until I return to school | 26 | 2.8 |
| until I fulfill my military and educational obligation | 14 | 1.5 |
| I do not anticipate changing jobs. | 263 | 28.8 |
| Other | 6 | .6 |

[1] Nurse graduates were not limited to one response. Percentages are calculated on number of participants.

**Table 44. — Nurse graduates: distribution by future plans for practicing nursing[1]**

| Future plans | Number | Percent |
|---|---|---|
| Continue in nursing (no change in area) | 362 | 39.6 |
| Continue in nursing (change area) | 239 | 26.1 |
| Continue nursing education | 440 | 48.1 |
| Quit nursing temporarily (e.g., travel, marry, move, work outside of nursing) | 29 | 3.2 |
| Quit nursing permanently | 16 | 1.7 |
| Change to other health related field | 13 | 1.4 |
| No response | 109 | 11.9 |

[1] Nurse graduates were not limited to a single response. Percentages were calculated on number of participants.

**Table 45. — Nurse graduates: distribution by participation in post-nursing school educational activities**

| Credits | Attendance | | | | Subject matter | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Yes | | No | | Nursing | | Non-nursing | | Not specified | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Semester hour credit | 105 | 11.5 | 809 | 88.5 | 38 | 36.2 | 67 | 63.8 | 0 | - |
| Quarter hour credit | 46 | 5.0 | 868 | 95.0 | 17 | 36.9 | 27 | 58.7 | 2 | 0.4 |
| Continuing education credit | 152 | 16.6 | 762 | 83.4 | 85 | 55.9 | 65 | 42.8 | 2 | 1.3 |
| Noncredit | 261 | 28.5 | 653 | 71.4 | 169 | 64.7 | 91 | 34.9 | 1 | 0.4 |

**Table 46. — Nurse graduates: distribution by plans for future education by school type**

| Plans for future education | Associate degree (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Associate degree | 3 | 0.8 | 11 | 3.3 | 1 | 0.4 | 15 | 1.6 |
| Baccalaureate degree | | | | | | | | |
| In nursing | 203 | 59.3 | 197 | 59.3 | 0 | - | 400 | 43.7 |
| In area other than nursing | 51 | 14.9 | 47 | 14.1 | 6 | 2.5 | 104 | 11.3 |
| Master's degree | | | | | | | | |
| In nursing | 52 | 15.2 | 35 | 10.5 | 172 | 71.6 | 259 | 28.3 |
| In area other than nursing | 18 | 5.2 | 10 | 3.0 | 29 | 12.0 | 57 | 6.2 |
| Doctorate degree | | | | | | | | |
| In nursing | 2 | 0.5 | 4 | 1.2 | 12 | 5.0 | 18 | 1.9 |
| In area other than nursing | 3 | 0.8 | 3 | 0.9 | 3 | 1.2 | 9 | 0.9 |
| Nursing practitioner program | 37 | 10.8 | 44 | 13.2 | 72 | 30.0 | 153 | 16.7 |
| Other (degrees or certificates — health and non-health related) | 16 | 4.6 | 20 | 6.0 | 17 | 7.0 | 53 | 5.7 |

**Table 47. — Nurse graduates: distribution by reasons for pursuing further degrees by school type[1]**

| Reasons for pursuing further degrees | AD (N=342) | | Diploma (N=332) | | Baccalaureate (N=240) | | Total (N=914) | |
|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Professional advancement | 123 | 35.9 | 124 | 37.3 | 111 | 46.2 | 358 | 39.1 |
| Professional enrichment | 136 | 39.7 | 107 | 32.2 | 115 | 47.9 | 358 | 39.1 |
| Personal enrichment | 93 | 27.1 | 86 | 25.9 | 89 | 37.0 | 268 | 29.4 |
| Professional necessity | 23 | 2.5 | 28 | 8.4 | - | - | 51 | 5.5 |

[1] Nurse graduates were not limited to a single response. Percentages are calculated on the number of participants.

**Table 48. — Nurse graduates: distribution by membership and participation in professional nursing organizations[1]**

| Membership and participation in professional nursing organizations | Number | Percent |
|---|---|---|
| Membership in professional nursing organizations: | | |
| Yes | 362 | 39.6 |
| No | 552 | 60.3 |
| Organization: | | |
| ANA | 210 | 22.9 |
| NLN | 1 | 0.1 |
| Nursing specialty associations | 69 | 7.5 |
| Alumni associations | 35 | 3.8 |
| Honor societies | 40 | 4.3 |
| Other/unspecified | 17 | 1.9 |
| Participating in professional nursing organizations: | | |
| Attend meetings: | | |
| Yes | 210 | 22.9 |
| No | 152 | 16.6 |
| Hold office: | | |
| Yes | 18 | 1.9 |
| No | 248 | 27.1 |

[1] Nurse graduates were not limited to a single response. Percentages are calculated on number of participants.

**Table 49. — Nursing graduates: distribution by reading patterns of professional publications[1]**

| Publication | Cover to cover | | Scan | | Articles of interest | | Articles recommended | | Required by courses | |
|---|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| *American Journal of Nursing* | 138 | 15.1 | 175 | 19.7 | 455 | 49.8 | 176 | 19.2 | 73 | 8.0 |
| *Nursing Forum* | - | - | 12 | 1.3 | 16 | 1.7 | 16 | 1.7 | 16 | 1.7 |
| *Nursing Outlook* | 6 | .6 | 47 | 5.1 | 62 | 6.8 | 46 | 5.0 | 23 | 2.5 |
| *Nursing Research* | 5 | .5 | 22 | 2.4 | 36 | 3.9 | 24 | 2.6 | 19 | 2.1 |
| *Nursing '76* | 295 | 32.3 | 136 | 14.9 | 320 | 35.0 | 130 | 14.2 | 46 | 5.0 |
| *RN* | 144 | 15.7 | 127 | 13.9 | 248 | 27.1 | 884 | 9.2 | 36 | 3.9 |
| Nursing Clinics of North America | 21 | 2.3 | 31 | 3.4 | 107 | 11.7 | 42 | 4.6 | 35 | 3.8 |
| Medical journals | 10 | 1.1 | 75 | 8.2 | 143 | 15.6 | 68 | 7.4 | 32 | 3.5 |
| Nursing specialty journals | 53 | 5.8 | 24 | 2.6 | 67 | 7.3 | 22 | 2.4 | 14 | 1.5 |
| Non-nursing professional journals | 18 | 2.0 | 3 | .3 | 20 | 2.2 | 1 | .1 | - | - |
| Others/textbooks | 13 | 1.4 | 3 | .3 | 13 | 1.4 | 4 | .4 | 2 | .2 |

[1] Nurse graduates were not limited to a single response. Percentages are calculated on number of participants.

**Table 50. — Nurse graduates: distribution by professional participation: presentations and articles written**

| Participation | Number | Percent |
|---|---|---|
| Participation | 139 | 15.2 |
| Non-participation | 747 | 81.7 |
| No response | 28 | 3.1 |
| Type of participation: | | |
| Workshops | 88 | 9.6 |
| Speeches | 42 | 4.6 |
| Articles | 11 | 1.2 |
| Other | 13 | 1.4 |

**Table 51. — Nurse graduates: comparison of selected variables by school type**

| Selected variables | AD (N=342) | | Diploma (N=332) | | Bacc. (N=240) | | Total (N=914) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| Age: | | | | | | | | | |
| Under 21 | 41 | 12.0 | 15 | 4.5 | 0 | - | 56 | 6.1 | [1]121.00 |
| 21 - 25 | 192 | 56.1 | 292 | 88.0 | 203 | 84.6 | 687 | 75.2 | |
| Over 25 | 102 | 29.8 | 24 | 7.2 | 36 | 15.0 | 162 | 17.7 | |
| No response | 7 | 2.0 | 1 | 0.3 | 1 | 0.4 | 9 | 1.0 | |
| Sex: | | | | | | | | | |
| Female | 312 | 91.2 | 313 | 94.3 | 214 | 89.2 | 839 | 91.8 | [2]9.50 |
| Male | 21 | 6.1 | 17 | 5.1 | 23 | 9.6 | 61 | 6.7 | |
| No response | 9 | 2.6 | 2 | 0.6 | 3 | 1.3 | 14 | 1.5 | |
| Race: | | | | | | | | | |
| American Indian/Alaskan Native | 2 | 0.6 | 3 | 0.9 | 0 | - | 5 | 0.5 | 11.57 |
| Asian or Pacific Islander | 2 | 0.6 | 2 | 0.6 | 0 | - | 4 | 0.4 | |
| Black/Negro | | | | | | | | | |
| Black/Hispanic | 17 | 5.0 | 6 | 1.8 | 4 | 1.7 | 27 | 3.0 | |
| Caucasian/White | | | | | | | | | |
| White/Hispanic | 318 | 93.0 | 319 | 96.1 | 234 | 97.5 | 871 | 95.3 | |
| No response | 3 | 0.9 | 2 | 0.6 | 2 | 0.8 | 7 | 0.8 | |
| Marital status: | | | | | | | | | |
| Single | 106 | 31.0 | 185 | 55.7 | 139 | 57.9 | 430 | 47.0 | [1]70.07 |
| Married | 196 | 57.3 | 134 | 40.4 | 92 | 38.3 | 422 | 46.2 | |
| Widowed | 4 | 1.2 | 1 | 0.3 | 2 | 0.8 | 7 | 0.8 | |
| Separated | 8 | 2.3 | 0 | - | 1 | 0.4 | 9 | 1.0 | |
| Divorced | 23 | 6.7 | 10 | 3.0 | 3 | 1.3 | 36 | 3.9 | |
| No response | 5 | 1.5 | 2 | 0.6 | 3 | 1.3 | 10 | 1.1 | |
| Number of children: | | | | | | | | | |
| Expecting | 13 | 3.8 | 5 | 1.5 | 5 | 2.1 | 23 | 2.5 | |
| Under 6 years | 53 | 15.5 | 20 | 6.0 | 11 | 4.5 | 84 | 9.1 | |
| 6-12 years | 72 | 21.0 | 16 | 4.8 | 10 | 4.1 | 98 | 10.7 | |
| 13-18 years | 51 | 14.9 | 12 | 3.6 | 10 | 4.1 | 73 | 7.9 | |
| Over 18 years | 33 | 9.6 | 7 | 2.1 | 9 | 3.7 | 49 | 5.4 | |
| No response | 196 | 57.3 | 288 | 86.7 | 215 | 89.5 | 699 | 76.5 | |
| Father's occupation: | | | | | | | | | |
| Physician/nurse | 6 | 1.7 | 5 | 1.5 | 15 | 6.2 | 26 | 2.8 | [1]87.5 |
| Other health professional | 1 | 0.3 | 6 | 1.8 | 8 | 3.3 | 15 | 1.6 | |
| Other professional | 32 | 9.3 | 33 | 9.9 | 41 | 17.1 | 106 | 11.6 | |
| Technical occupation | 13 | 3.8 | 14 | 4.2 | 10 | 4.2 | 37 | 4.0 | |
| Farmer | 28 | 8.2 | 33 | 9.9 | 24 | 10.0 | 85 | 9.3 | |
| Proprietor/manager/supervisor | 66 | 19.3 | 69 | 20.8 | 42 | 17.5 | 177 | 19.4 | |
| Skilled labor | 61 | 17.8 | 44 | 13.2 | 23 | 9.6 | 128 | 14.0 | |
| Semiskilled or unskilled labor | 57 | 16.7 | 66 | 19.9 | 28 | 11.7 | 151 | 16.5 | |
| Clerical occupation | 8 | 2.3 | 5 | 1.5 | 6 | 2.5 | 19 | 2.1 | |

See footnotes at end of table.

**Table 51. — Nurse graduates: comparison of selected variables by school type — Continued**

| Selected variables | AD (N=342) | | Diploma (N=332) | | Bacc. (N=240) | | Total (N=914) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| Father's occupation cont'd: | | | | | | | | | |
| Sales occupation | 13 | 3.8 | 20 | 6.0 | 13 | 5.4 | 46 | 5.0 | |
| Public/military service | 20 | 5.8 | 19 | 5.7 | 20 | 8.3 | 59 | 6.4 | |
| Unemployed | 4 | 1.2 | 2 | 0.6 | 1 | 0.4 | 7 | 0.8 | |
| Retired | 1 | 0.3 | 3 | 0.9 | 1 | 0.4 | 5 | 0.5 | |
| Deceased | 18 | 5.3 | 7 | 2.1 | 4 | 1.7 | 29 | 3.2 | |
| No response | 14 | 4.1 | 6 | 1.8 | 4 | 1.7 | 24 | 2.6 | |
| Spouse's occupation: | | | | | | | | | |
| Physician/nurse | 8 | 3.9 | 8 | 6.0 | 8 | 8.2 | 24 | 5.5 | [1]80.43 |
| Other health professional | 7 | 3.4 | 1 | 0.7 | 3 | 3.1 | 11 | 2.5 | |
| Other professional | 35 | 17.2 | 25 | 18.7 | 19 | 19.4 | 79 | 18.2 | |
| Technical occupation | 20 | 9.8 | 8 | 6.0 | 7 | 7.1 | 35 | 8.0 | |
| Farmer | 6 | 2.9 | 8 | 6.0 | 2 | 2.0 | 16 | 3.6 | |
| Proprietor/manager/supervisor | 25 | 12.3 | 10 | 7.5 | 11 | 11.2 | 46 | 10.5 | |
| Skilled labor | 28 | 13.7 | 16 | 12.0 | 4 | 4.1 | 48 | 11.1 | |
| Semiskilled or unskilled labor | 11 | 5.4 | 20 | 15.0 | 3 | 3.1 | 34 | 7.8 | |
| Clerical occupation | 9 | 4.4 | 4 | 3.0 | 5 | 5.1 | 18 | 4.1 | |
| Sales occupation | 6 | 2.9 | 11 | 8.3 | 3 | 3.1 | 20 | 4.6 | |
| Public/military service | 21 | 10.3 | 7 | 5.2 | 9 | 9.2 | 37 | 8.5 | |
| Student | 15 | 7.3 | 12 | 9.0 | 20 | 20.4 | 47 | 10.8 | |
| Homemaker | 5 | 2.4 | 1 | 0.7 | 3 | 3.1 | 9 | 2.1 | |
| Unemployed | 3 | 1.4 | 2 | 1.5 | 1 | 1.0 | 6 | 1.4 | |
| Retired | 2 | 0.9 | 0 | - | 0 | - | 2 | 0.4 | |
| Deceased | 2 | 0.9 | 0 | - | 0 | - | 2 | 0.4 | |
| No response | 139 | 40.6 | 199 | 59.9 | 142 | 59.2 | 480 | 52.5 | |
| Father's highest educational level: | | | | | | | | | |
| Elementary school | 66 | 19.3 | 35 | 10.5 | 27 | 11.3 | 128 | 14.0 | |
| Some high school | 59 | 17.3 | 54 | 16.3 | 30 | 12.5 | 143 | 15.6 | |
| High school graduate | 96 | 28.9 | 104 | 31.3 | 49 | 20.4 | 249 | 27.2 | |
| Post-high school studies | 41 | 12.0 | 59 | 17.8 | 30 | 12.5 | 130 | 14.2 | |
| Post-high school certificate | 18 | 5.3 | 24 | 7.2 | 10 | 4.2 | 52 | 5.7 | |
| Baccalaureate degree | 27 | 7.9 | 30 | 9.0 | 41 | 17.1 | 98 | 10.7 | |
| Master's degree | 13 | 3.8 | 12 | 3.6 | 16 | 6.7 | 41 | 4.5 | |
| Doctoral degree | 1 | 0.3 | 0 | - | 4 | 1.7 | 5 | 0.5 | |
| Professional degree | 12 | 3.5 | 12 | 3.6 | 30 | 12.5 | 54 | 5.9 | |
| No response | 9 | 2.6 | 2 | 0.6 | 3 | 1.3 | 14 | 1.5 | |
| Spouse's highest educational level: | | | | | | | | | |
| Elementary school | 4 | 1.9 | 1 | 0.7 | 0 | - | 5 | 1.1 | |
| Some high school | 5 | 2.4 | 5 | 3.6 | 0 | - | 10 | 2.3 | |
| High school graduate | 39 | 19.0 | 19 | 13.9 | 8 | 8.2 | 66 | 15.0 | |
| Post-high school studies | 51 | 24.9 | 25 | 18.2 | 13 | 13.3 | 89 | 20.2 | |
| Post-high school certificate | 33 | 16.1 | 30 | 21.9 | 10 | 10.2 | 73 | 16.6 | |
| Baccalaureate degree | 46 | 22.4 | 43 | 31.4 | 49 | 50.0 | 138 | 31.4 | |
| Master's degree | 16 | 7.8 | 9 | 6.6 | 11 | 11.2 | 36 | 8.2 | |
| Doctoral degree | 3 | 1.5 | 0 | - | 1 | 0.1 | 4 | 0.9 | |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 8 | 3.9 | 5 | 3.6 | 6 | 6.1 | 19 | 4.3 | |
| No response | 137 | 39.8 | 195 | 58.7 | 142 | 59.2 | 474 | 51.9 | |
| High school rank: | | | | | | | | | |
| Upper 10 percent | 140 | 40.9 | 145 | 43.7 | 135 | 56.3 | 420 | 46.0 | [1]37.16 |
| Upper 25 percent | 103 | 30.1 | 112 | 33.7 | 72 | 30.0 | 287 | 31.4 | |
| Upper 50 percent | 68 | 19.9 | 58 | 17.5 | 19 | 7.9 | 145 | 15.9 | |
| Lower 50 percent | 10 | 2.9 | 11 | 3.3 | 11 | 4.6 | 32 | 3.5 | |
| No response | 21 | 6.1 | 6 | 1.8 | 3 | 1.3 | 30 | 3.3 | |
| State Board scores: | | | | | | | | | |
| Pediatric | | | | | | | | | |
| Below 400 | 21 | 7.3 | 11 | 3.8 | 7 | 3.6 | 39 | 5.0 | [3]14.78 |

**Table 51. — Nurse graduates: comparison of selected variables by school type — Continued**

| Selected variables | AD (N=342) | | Diploma (N=332) | | Bacc. (N=240) | | Total (N=914) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| State Board Scores cont'd: | | | | | | | | | |
| 400 - 599 | 171 | 59.8 | 157 | 54.1 | 133 | 67.5 | 461 | 59.6 | |
| 600 and above | 94 | 32.9 | 122 | 42.1 | 57 | 28.9 | 273 | 35.3 | |
| Medical | | | | | | | | | |
| Below 400 | 17 | 6.0 | 9 | 3.1 | 8 | 4.1 | 34 | 4.4 | 6.01 |
| 400 - 599 | 164 | 57.5 | 153 | 52.8 | 115 | 58.4 | 432 | 56.0 | |
| 600 and above | 104 | 36.5 | 128 | 44.1 | 74 | 37.6 | 306 | 39.6 | |
| Surgical | | | | | | | | | |
| Below 400 | 11 | 3.9 | 7 | 2.4 | 13 | 6.6 | 31 | 4.0 | 8.91 |
| 400 - 599 | 168 | 58.9 | 158 | 54.5 | 118 | 59.9 | 444 | 57.5 | |
| 600 and above | 106 | 37.2 | 125 | 43.1 | 66 | 33.5 | 297 | 38.5 | |
| Obstetrics | | | | | | | | | |
| Below 400 | 19 | 6.6 | 13 | 4.5 | 9 | 4.6 | 41 | 5.3 | 5.24 |
| 400 - 599 | 167 | 58.2 | 163 | 56.2 | 127 | 64.5 | 457 | 59.0 | |
| 600 and above | 101 | 35.2 | 114 | 39.3 | 61 | 31.0 | 276 | 35.7 | |
| Psychiatric | | | | | | | | | |
| Below 400 | 20 | 7.0 | 15 | 5.2 | 8 | 4.1 | 43 | 5.6 | 5.97 |
| 400 - 599 | 175 | 61.4 | 186 | 64.4 | 112 | 56.9 | 473 | 61.3 | |
| 600 and above | 90 | 31.6 | 88 | 30.4 | 77 | 39.1 | 255 | 33.1 | |
| Age decided to become a nurse: | | | | | | | | | |
| Under 10 years | 46 | 13.5 | 59 | 17.8 | 44 | 18.3 | 149 | 16.3 | [1]62.79 |
| 10 - 13 years | 31 | 9.1 | 40 | 12.0 | 23 | 9.6 | 94 | 10.3 | |
| 14 - 15 years | 28 | 8.2 | 58 | 17.5 | 26 | 10.8 | 112 | 12.3 | |
| 16 - 17 years | 65 | 19.0 | 101 | 30.4 | 62 | 25.8 | 228 | 24.9 | |
| Over 18 years | 170 | 49.7 | 73 | 22.0 | 83 | 34.6 | 326 | 35.7 | |
| No response | 2 | 0.6 | 1 | 0.3 | 2 | 0.8 | 5 | 0.5 | |
| Employment status: | | | | | | | | | |
| Full time in nursing | 257 | 75.1 | 297 | 89.4 | 212 | 88.3 | 766 | 83.8 | |
| Part time in nursing | 38 | 11.1 | 26 | 7.8 | 13 | 5.4 | 77 | 8.4 | |
| Non-nursing employment | 3 | 0.8 | 1 | 0.3 | 1 | 0.4 | 5 | 0.5 | |
| Employed in nursing since graduation but not presently employed | 28 | 8.2 | 8 | 2.4 | 6 | 2.5 | 42 | 4.6 | |
| Not employed in nursing since graduation | 16 | 4.6 | 3 | 0.9 | 7 | 2.9 | 26 | 2.8 | |
| Type of employing agency: | | | | | | | | | |
| Hospital | 243 | 71.1 | 283 | 85.2 | 170 | 70.8 | 696 | 76.1 | [1]157.00 |
| Long-term care facility | 12 | 3.5 | 4 | 1.2 | 0 | - | 16 | 1.8 | |
| Government facility | 9 | 2.6 | 7 | 2.1 | 27 | 11.2 | 43 | 4.7 | |
| Private clinic | 12 | 3.5 | 9 | 2.7 | 4 | 1.7 | 25 | 2.7 | |
| Industry | 4 | 1.2 | 1 | 0.3 | 0 | - | 5 | 0.5 | |
| Public health agency | 1 | 0.3 | 7 | 2.1 | 12 | 5.0 | 20 | 2.2 | |
| School of nursing | 0 | - | 0 | - | 4 | 1.7 | 4 | 0.4 | |
| School board | 1 | 0.3 | 1 | 0.3 | 1 | 0.4 | 3 | 0.3 | |
| Unemployed/no response | 60 | 17.5 | 20 | 6.0 | 22 | 9.2 | 102 | 11.2 | |
| Position held: | | | | | | | | | |
| Staff nurse | 240 | 70.2 | 300 | 90.4 | 198 | 82.5 | 738 | 80.7 | [1]74.59 |
| Private duty | 2 | 0.6 | 1 | 0.3 | 0 | - | 3 | 0.3 | |
| Assistant head nurse | 10 | 2.9 | 3 | 0.9 | 0 | - | 13 | 1.4 | |
| Head nurse | 21 | 6.1 | 6 | 1.8 | 7 | 2.9 | 34 | 3.7 | |
| Supervisor | 8 | 2.3 | 4 | 1.2 | 1 | 0.4 | 13 | 1.4 | |
| Instructor | 1 | 0.3 | 1 | 0.3 | 7 | 2.9 | 9 | 1.0 | |
| Other | 2 | 0.6 | 1 | 0.3 | 5 | 2.1 | 8 | 0.9 | |
| No response | 58 | 17.0 | 16 | 4.8 | 22 | 9.2 | 96 | 10.5 | |
| Salary: | | | | | | | | | |
| Under $6,000 | 22 | 6.4 | 16 | 4.8 | 12 | 5.0 | 50 | 5.5 | [1]72.28 |
| $6,000 - 7,999 | 54 | 15.8 | 33 | 9.9 | 10 | 4.2 | 97 | 10.6 | |
| $8,000 - 9,999 | 108 | 31.6 | 122 | 36.7 | 73 | 30.4 | 303 | 33.2 | |
| $10,000 - 11,999 | 89 | 26.0 | 114 | 34.3 | 91 | 37.9 | 294 | 32.2 | |

**Table 51. — Nurse graduates: comparison of selected variables by school type — Continued**

| Selected variables | AD (N=342) | | Diploma (N=332) | | Bacc. (N=240) | | Total (N=914) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| Salary cont'd: | | | | | | | | | |
| $12,000 - 14,999 | 16 | 4.7 | 27 | 8.1 | 26 | 10.8 | 69 | 7.5 | |
| $15,000 - 16,999 | 0 | - | 1 | 0.3 | 2 | 0.8 | 3 | 0.3 | |
| $17,000 and above | 0 | - | 0 | - | 6 | 2.5 | 6 | 0.7 | |
| No response | 53 | 15.5 | 19 | 5.7 | 20 | 8.3 | 92 | 10.1 | |
| Future plans for practicing nursing: | | | | | | | | | |
| Continue in nursing in same position | 153 | 44.7 | 129 | 38.9 | 80 | 33.3 | 362 | 39.6 | |
| Continue in nursing in different position | 84 | 24.6 | 89 | 26.8 | 66 | 27.5 | 239 | 26.1 | |
| Continue nursing education | 177 | 51.8 | 115 | 34.6 | 148 | 61.6 | 440 | 48.1 | |
| Quit nursing temporarily | 18 | 5.3 | 5 | 1.5 | 6 | 2.5 | 29 | 3.2 | |
| Quit nursing permanently | 5 | 1.5 | 10 | 3.0 | 1 | 0.4 | 16 | 1.7 | |
| Change to another field of employment | 2 | 0.5 | 7 | 2.1 | 4 | 1.7 | 13 | 1.4 | |
| Membership and Participation in Professional Nursing Organizations: | | | | | | | | | |
| Membership | 80 | 23.3 | 111 | 33.4 | 118 | 49.1 | 309 | 33.8 | |
| Organization: | | | | | | | | | |
| ANA | 59 | 17.2 | 67 | 20.1 | 84 | 35.0 | 210 | 22.9 | |
| Other (e.g., nursing specialty, alumni, honor) | 31 | 9.1 | 65 | 19.5 | 66 | 27.5 | 162 | 17.7 | |
| Participation: | | | | | | | | | |
| Attend meetings | 50 | 14.6 | 79 | 23.7 | 81 | 33.7 | 210 | 22.9 | |
| Hold office | 6 | 1.7 | 4 | 1.2 | 8 | 3.3 | 18 | 1.9 | |

[1] Significant at p<.001.
[2] Significant at p<.05.
[3] Significant at p<.01.

**Table 52. — Nurse graduates: comparison of selected variables by geographic region**

| Selected variables | No. Atlantic (N=230) | | Midwest (N=311) | | South (N=227) | | West (N=146) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| Age: | | | | | | | | | |
| Under 21 | 16 | 7.0 | 20 | 6.4 | 13 | 5.7 | 7 | 4.8 | [1]29.02 |
| 21-25 | 184 | 80.0 | 246 | 79.1 | 153 | 67.4 | 104 | 71.2 | |
| Over 25 | 29 | 12.6 | 42 | 13.5 | 60 | 26.4 | 31 | 21.2 | |
| No response | 1 | 0.1 | 3 | 1.0 | 1 | 0.4 | 4 | 2.7 | |
| Sex: | | | | | | | | | |
| Female | 212 | 92.2 | 289 | 92.9 | 203 | 89.4 | 135 | 92.5 | 10.05 |
| Male | 17 | 7.4 | 17 | 5.5 | 21 | 9.3 | 6 | 4.1 | |
| No response | 1 | 0.4 | 5 | 1.6 | 3 | 1.3 | 5 | 3.4 | |
| Race: | | | | | | | | | |
| AmericanIndian/Alaskan Native | 0 | - | 3 | 1.0 | 0 | - | 2 | 1.4 | [1]36.94 |
| Asian or Pacific Islander | 0 | - | 1 | 0.3 | 0 | - | 3 | 2.1 | |
| Black/Negro | | | | | | | | | |
| Black/Hispanic | 1 | 0.4 | 6 | 1.9 | 16 | 7.0 | 4 | 2.7 | |
| Caucasian/White | | | | | | | | | |
| White/Hispanic | 228 | 99.1 | 299 | 96.1 | 209 | 92.1 | 135 | 92.5 | |
| No response | 1 | 0.4 | 2 | 0.6 | 2 | 0.9 | 2 | 1.4 | |
| Marital status: | | | | | | | | | |
| Single | 137 | 59.6 | 156 | 50.2 | 67 | 29.5 | 70 | 47.9 | [1]47.18 |
| Married | 83 | 36.1 | 135 | 43.4 | 139 | 61.2 | 65 | 44.5 | |
| Widowed | 1 | 0.4 | 2 | 0.6 | 3 | 1.3 | 1 | 0.7 | |
| Separated | 1 | 0.4 | 3 | 1.0 | 4 | 1.8 | 1 | 0.7 | |
| Divorced | 5 | 2.2 | 12 | 3.9 | 11 | 4.8 | 8 | 5.5 | |
| No response | 3 | 1.3 | 3 | 1.0 | 3 | 1.3 | 1 | 0.7 | |

See footnotes at end of table.

**Table 52. — Nurse graduates: comparison of selected variables by geographic region — Continued**

| Selected variables | No. Atlantic (N = 230) | | Midwest (N = 311) | | South (N = 227) | | West (N = 146) | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | $X^2$ |
| Number of children: | | | | | | | | | |
| Expecting | 5 | 2.2 | 11 | 3.5 | 4 | 1.8 | 3 | 2.1 | |
| Under 6 years | 14 | 6.1 | 21 | 6.8 | 39 | 17.2 | 10 | 6.8 | |
| 6-12 years | 9 | 3.9 | 23 | 7.4 | 45 | 19.8 | 21 | 14.4 | |
| 13-18 years | 13 | 5.7 | 20 | 6.4 | 27 | 11.9 | 13 | 8.9 | |
| Over 18 years | 9 | 3.9 | 16 | 5.1 | 13 | 5.7 | 11 | 7.5 | |
| No response | 199 | 86.5 | 252 | 81.0 | 142 | 62.6 | 106 | 72.6 | |
| Father's occupation: | | | | | | | | | |
| Physician/nurse | 4 | 1.7 | 11 | 3.5 | 6 | 2.6 | 5 | 3.4 | [1]109.8 |
| Other health professional | 2 | 0.8 | 6 | 1.9 | 3 | 1.3 | 4 | 2.7 | |
| Other professional | 25 | 10.9 | 30 | 9.6 | 27 | 11.9 | 24 | 16.4 | |
| Technical occupation | 12 | 5.2 | 13 | 4.2 | 7 | 3.1 | 5 | 3.4 | |
| Farmer | 9 | 3.9 | 49 | 15.7 | 16 | 7.0 | 11 | 7.5 | |
| Proprietor/manager/supervisor | 46 | 20.0 | 58 | 18.6 | 46 | 20.3 | 27 | 18.5 | |
| Skilled labor | 31 | 13.8 | 44 | 14.1 | 39 | 17.2 | 14 | 9.[illegible] | |
| Semiskilled or unskilled labor | 55 | 23.9 | 47 | 15.1 | 27 | 11.9 | 22 | 15.1 | |
| Clerical occupation | 7 | 3.0 | 4 | 1.3 | 4 | 1.8 | 4 | 2.7 | |
| Sales occupation | 9 | 3.9 | 17 | 5.5 | 10 | 4.4 | 10 | 6.8 | |
| Public/military service | 17 | 7.4 | 16 | 5.1 | 14 | 6.2 | 12 | 8.2 | |
| Unemployed | 1 | 0.4 | 3 | 1.0 | 3 | 1.3 | 0 | - | |
| Retired | 2 | 0.8 | 1 | 0.3 | 1 | 0.4 | 1 | 0.6 | |
| Deceased | 3 | 1.3 | 11 | 3.5 | 14 | 6.2 | 1 | 0.6 | |
| No response | 7 | 3.0 | 1 | 0.3 | 10 | 4.4 | 6 | 4.1 | |
| Spouse's occupation: | | | | | | | | | |
| Physician/nurse | 5 | 5.7 | 7 | 5.2 | 6 | 4.1 | 6 | 9.1 | |
| Other health professional | 2 | 2.3 | 4 | 2.9 | 4 | 2.7 | 1 | 1.5 | |
| Other professional | 14 | 16.1 | 27 | 20.1 | 26 | 17.7 | 12 | 18.1 | |
| Technical occupation | 4 | 4.6 | 14 | 10.4 | 11 | 7.5 | 6 | 9.1 | |
| Farmer | 3 | 3.4 | 9 | 6.7 | 3 | 2.0 | 1 | 1.5 | |
| Proprietor/manager/supervisor | 9 | 10.3 | 12 | 8.9 | 17 | 11.6 | 8 | 12.1 | |
| Skilled labor | 11 | 12.6 | 17 | 12.7 | 17 | 11.6 | 3 | 4.5 | |
| Semiskilled or unskilled labor | 7 | 8.0 | 10 | 7.5 | 14 | 9.5 | 3 | 4.5 | |
| Clerical occupation | 4 | 4.6 | 2 | 1.5 | 9 | 6.1 | 3 | 4.5 | |
| Sales occupation | 9 | 10.3 | 5 | 3.7 | 3 | 2.0 | 3 | 4.5 | |
| Public/military service | 4 | 4.5 | 6 | 4.5 | 20 | 13.6 | 7 | 10.6 | |
| Student | 8 | 9.2 | 18 | 13.4 | 11 | 7.5 | 10 | 15.1 | |
| Homemaker | 5 | 5.7 | 2 | 1.5 | 2 | 1.4 | 0 | - | |
| Unemployed | 2 | 2.2 | 0 | - | 2 | 1.4 | 2 | 3.0 | |
| Retired | 0 | - | 1 | 0.7 | 0 | - | 1 | 1.5 | |
| Deceased | 0 | - | 0 | - | 2 | 1.4 | 0 | - | |
| Father's highest educational level: | | | | | | | | | |
| Elementary school | 28 | 12.2 | 45 | 14.5 | 38 | 16.7 | 17 | 11.6 | [2]43.69 |
| Some high school | 42 | 18.3 | 55 | 17.7 | 35 | 15.4 | 11 | 7.5 | |
| High school graduate | 61 | 26.5 | 92 | 29.6 | 61 | 26.9 | 35 | 23.9 | |
| Post-high school studies, but no certificate or diploma | 31 | 13.5 | 45 | 14.5 | 25 | 11.0 | 29 | 19.9 | |
| Post-high school certificate, diploma, or associate degree | 17 | 7.4 | 16 | 5.1 | 11 | 4.8 | 8 | 5.5 | |
| Baccalaureate degree | 26 | 11.3 | 22 | 7.1 | 28 | 12.3 | 22 | 15.1 | |
| Master's degree | 14 | 6.1 | 10 | 3.2 | 8 | 3.5 | 9 | 6.2 | |
| Doctoral degree | 1 | 0.4 | 3 | 1.0 | 0 | - | 1 | 0.7 | |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 8 | 3.5 | 20 | 6.4 | 15 | 6.6 | 11 | 7.5 | |
| Spouse's highest educational level: | | | | | | | | | |
| Elementary school | 0 | - | 1 | 0.7 | 3 | 2.1 | 1 | 1.5 | |
| Some high school | 3 | 3.4 | 3 | 2.1 | 4 | 2.7 | 0 | - | |
| High school graduate | 11 | 12.6 | 21 | 14.9 | 26 | 17.8 | 8 | 12.1 | |

**Table 52. — Nurse graduates: comparison of selected variables by geographic region — Continued**

| Selected variables | No. Atlantic (N = 230) | | Midwest (N = 311) | | South (N = 227) | | West (N = 146) | | |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | $X^2$ |
| Spouse's highest educational level cont'd: | | | | | | | | | |
| Post-high school studies, but no certificate or diploma | 18 | 20.7 | 26 | 18.4 | 29 | 19.9 | 16 | 24.2 | |
| Post-high school certificate, diploma, or associate degree | 16 | 18.4 | 26 | 18.4 | 23 | 15.8 | 8 | 12.1 | |
| Baccalaureate degree | 30 | 34.5 | 48 | 34.0 | 44 | 30.1 | 16 | 24.2 | |
| Master's degree | 4 | 4.6 | 11 | 7.8 | 11 | 7.5 | 10 | 15.1 | |
| Doctoral degree | 1 | 1.1 | 0 | - | 2 | 1.4 | 1 | 1.5 | |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 4 | 4.6 | 5 | 3.5 | 4 | 2.7 | 6 | 9.1 | |
| High School Rank: | | | | | | | | | |
| Upper 10 percent | 94 | 40.9 | 159 | 51.1 | 108 | 47.6 | 59 | 40.4 | 20.64 |
| Upper 25 percent | 86 | 37.4 | 93 | 29.9 | 62 | 27.3 | 46 | 31.5 | |
| Upper 50 percent | 36 | 15.7 | 48 | 15.4 | 36 | 15.9 | 25 | 17.1 | |
| Lower 50 percent | 8 | 3.5 | 7 | 2.3 | 9 | 4.0 | 8 | 5.5 | |
| No response | 6 | 2.6 | 4 | 1.3 | 12 | 5.3 | 8 | 5.5 | |
| State Board scores: | | | | | | | | | |
| Pediatric | | | | | | | | | |
| Below 400 | 6 | 2.8 | 11 | 4.1 | 16 | 8.2 | 6 | 6.0 | [2]18.80 |
| 400-599 | 131 | 61.8 | 150 | 56.2 | 129 | 66.5 | 51 | 51.0 | |
| 600 and above | 75 | 35.4 | 106 | 39.7 | 49 | 25.3 | 43 | 43.0 | |
| Medical | | | | | | | | | |
| Below 400 | 8 | 3.8 | 7 | 2.6 | 13 | 6.7 | 6 | 6.0 | 9.21 |
| 400-599 | 117 | 55.2 | 149 | 55.8 | 116 | 60.1 | 50 | 50.0 | |
| 600 and above | 87 | 41.0 | 111 | 41.6 | 64 | 33.2 | 44 | 44.0 | |
| Surgical | | | | | | | | | |
| Below 400 | 6 | 2.8 | 6 | 2.2 | 12 | 6.2 | 7 | 7.0 | 11.79 |
| 400-599 | 124 | 58.5 | 159 | 59.6 | 114 | 59.1 | 47 | 47.0 | |
| 600 and above | 82 | 38.7 | 102 | 38.2 | 67 | 34.7 | 46 | 46.0 | |
| Obstetrics | | | | | | | | | |
| Below 400 | 10 | 4.7 | 11 | 4.1 | 15 | 7.7 | 5 | 5.0 | [1]99.57 |
| 400-599 | 135 | 63.7 | 149 | 55.6 | 119 | 61.3 | 54 | 54.0 | |
| 600 and above | 67 | 31.6 | 108 | 40.3 | 60 | 30.9 | 41 | 41.0 | |
| Psychiatric | | | | | | | | | |
| Below 400 | 12 | 5.7 | 7 | 2.6 | 19 | 9.8 | 5 | 5.0 | [2]21.54 |
| 400-599 | 141 | 66.5 | 163 | 61.3 | 119 | 61.7 | 50 | 50.0 | |
| 600 and above | 59 | 27.8 | 96 | 36.1 | 55 | 28.5 | 45 | 45.0 | |
| Age decided to become a nurse: | | | | | | | | | |
| Under 10 years | 44 | 19.1 | 55 | 17.7 | 29 | 12.8 | 21 | 14.4 | [2]27.56 |
| 10 - 13 years | 19 | 8.3 | 33 | 10.6 | 24 | 10.6 | 18 | 12.3 | |
| 14 - 15 years | 34 | 14.8 | 45 | 14.5 | 21 | 9.3 | 12 | 8.2 | |
| 16 - 17 years | 63 | 27.4 | 83 | 26.7 | 54 | 23.8 | 28 | 19.2 | |
| Over 18 years | 70 | 30.4 | 93 | 29.9 | 97 | 42.7 | 66 | 45.2 | |
| No response | 0 | - | 2 | 0.6 | 2 | 0.9 | 1 | 0.7 | |
| Employment status: | | | | | | | | | |
| Full time in nursing | 201 | 87.3 | 268 | 86.1 | 188 | 82.8 | 109 | 74.6 | |
| Part time in nursing | 15 | 6.5 | 27 | 8.6 | 20 | 8.8 | 15 | 10.2 | |
| Non-nursing employment | 1 | 0.4 | 1 | 0.3 | 3 | 1.3 | 0 | - | |
| Employed in nursing since graduation, but not presently | 7 | 3.0 | 9 | 2.8 | 10 | 4.4 | 16 | 11.0 | |
| Not employed in nursing since graduation | 7 | 3.0 | 4 | 1.3 | 9 | 3.9 | 6 | 4.1 | |
| Type of employing agency: | | | | | | | | | |
| Hospital | 175 | 76.1 | 261 | 83.9 | 159 | 70.0 | 101 | 69.2 | [1]98.61 |
| Long-term care facility | 3 | 1.3 | 3 | 1.0 | 8 | 3.5 | 2 | 1.4 | |
| Government facility | 9 | 3.9 | 8 | 2.6 | 18 | 7.9 | 8 | 5.4 | |
| Private clinic | 7 | 3.0 | 9 | 2.9 | 6 | 2.6 | 3 | 2.1 | |
| Industry | 0 | - | 1 | 0.3 | 4 | 1.8 | 0 | - | |
| Public health agency | 10 | 4.3 | 5 | 1.6 | 2 | 0.9 | 3 | 2.1 | |

**Table 52. — Nurse graduates: comparison of selected variables by geographic region — Continued**

| Selected variables | No. Atlantic (N = 230) | | Midwest (N = 311) | | South (N = 227) | | West (N = 146) | | $X^2$ |
|---|---|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | |
| Type of employing agency cont'd: | | | | | | | | | |
| School of nursing | 1 | 0.1 | 2 | 0.6 | 1 | 0.4 | 0 | - | |
| School board | 0 | - | 2 | 0.6 | 1 | 0.4 | 0 | - | |
| Unemployed/no response | 25 | 10.9 | 20 | 6.4 | 28 | 12.3 | 29 | 19.9 | |
| Position held: | | | | | | | | | |
| Staff nurse | 195 | 84.8 | 281 | 90.4 | 147 | 64.8 | 115 | 78.8 | [1]107.74 |
| Private duty | 2 | 0.9 | 0 | - | 1 | 0.4 | 0 | - | |
| Assistant head nurse | 1 | 0.4 | 1 | 0.3 | 9 | 4.0 | 2 | 1.4 | |
| Head nurse | 7 | 3.0 | 4 | 1.3 | 23 | 10.1 | 0 | - | |
| Supervisor | 2 | 0.9 | 1 | 0.3 | 10 | 4.4 | 0 | - | |
| Instructor | 2 | 0.9 | 2 | 0.6 | 5 | 2.2 | 0 | - | |
| Other | 1 | 0.4 | 3 | 1.0 | 2 | 0.9 | 2 | 1.4 | |
| No response | 20 | 8.7 | 19 | 6.1 | 30 | 13.2 | 27 | 18.5 | |
| Salary: | | | | | | | | | |
| Under $6,000 | 11 | 4.8 | 19 | 6.1 | 13 | 5.7 | 7 | 4.8 | [1]82.22 |
| $6,000 - 7,999 | 21 | 9.1 | 36 | 11.6 | 30 | 13.2 | 10 | 6.8 | |
| $8,000 - 9,999 | 78 | 33.9 | 102 | 32.8 | 94 | 41.4 | 29 | 19.9 | |
| $10,000 - 11,999 | 84 | 36.5 | 110 | 35.4 | 49 | 21.6 | 51 | 34.9 | |
| $12,000 - 14,999 | 117 | 7.4 | 21 | 6.8 | 7 | 3.1 | 24 | 16.4 | |
| $15,000 - 16,999 | 1 | 0.4 | 0 | - | 2 | 0.9 | 0 | - | |
| $17,000 and above | 0 | - | 0 | - | 6 | 2.6 | 0 | - | |
| No response | 18 | 7.8 | 23 | 7.4 | 26 | 11.5 | 25 | 17.1 | |
| Future plans for practicing nursing: | | | | | | | | | |
| Continue in nursing in same position | 85 | 36.9 | 128 | 41.1 | 104 | 45.8 | 45 | 30.8 | |
| Continue in nursing in different position | 64 | 27.8 | 82 | 26.3 | 50 | 22.0 | 43 | 29.4 | |
| Continue nursing education | 105 | 45.6 | 136 | 43.7 | 136 | 59.9 | 63 | 43.1 | |
| Quit nursing temporarily | 7 | 3.0 | 9 | 2.8 | 8 | 3.5 | 5 | 3.4 | |
| Quit nursing permanently | 7 | 3.0 | 1 | 0.3 | 3 | 1.3 | 5 | 3.4 | |
| Change to another field of employment | 4 | 1.7 | 3 | 0.9 | 5 | 2.2 | 1 | 0.6 | |
| Membership and participation in professional nursing organizations: | | | | | | | | | |
| Membership | 75 | 32.6 | 108 | 34.7 | 78 | 34.3 | 48 | 32.8 | |
| Organization: | | | | | | | | | |
| ANA | 46 | 20.0 | 73 | 23.4 | 57 | 25.1 | 34 | 23.2 | |
| Other (e.g., nursing specialty, alumni, honor society, etc.) | 47 | 20.4 | 58 | 18.6 | 36 | 15.8 | 21 | 14.3 | |
| Participation: | | | | | | | | | |
| Attend meetings | 52 | 22.6 | 78 | 25.0 | 52 | 22.9 | 28 | 19.1 | |
| Hold office | 4 | 1.7 | 3 | 0.9 | 8 | 3.5 | 3 | 2.1 | |

[1] Significant at $p < .001$.
[2] Significant at $p < .01$.
[3] Significant at $p < .05$.

**Table 53. — Nurse graduates: comparison of selected variables by nomination status**

| Selected variables | Most promising (N=327) | | Promising (N=306) | | Nonselected (N=281) | | $X^2$ |
|---|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. | |
| Age: | | | | | | | |
| Under 21 | 17 | 5.2 | 22 | 7.2 | 17 | 6.0 | 9.01 |
| 21 - 25 | 240 | 73.3 | 224 | 73.2 | 223 | 79.4 | |
| Over 25 | 67 | 20.5 | 57 | 18.6 | 38 | 13.5 | |
| No response | 3 | 0.9 | 3 | 1.0 | 3 | 1.1 | |

**Table 53. — Nurse graduates: comparison of selected variables by nomination status — Continued**

| Selected variables | Most promising (N=327) No. | Pct. | Promising (N=306) No. | Pct. | Nonselected (N=281) No. | Pct. | $X^2$ |
|---|---|---|---|---|---|---|---|
| Sex: | | | | | | | |
| Female | 296 | 90.5 | 278 | 90.8 | 265 | 94.3 | 4.18 |
| Male | 24 | 7.4 | 24 | 7.8 | 13 | 4.6 | |
| No response | 7 | 2.1 | 4 | 1.3 | 3 | 1.1 | |
| Race: | | | | | | | |
| American Indian/Alaskan Native | 2 | 0.6 | 2 | 0.7 | 1 | 0.4 | 7.92 |
| Asian or Pacific Islander | 1 | 0.3 | 2 | 0.7 | 1 | 0.4 | |
| Black/Negro | | | | | | | |
| Black/Hispanic | 11 | 3.4 | 10 | 3.3 | 6 | 2.1 | |
| Caucasian/White | | | | | | | |
| White/Hispanic | 311 | 95.1 | 292 | 95.4 | 268 | 95.4 | |
| No response | 2 | 0.6 | 0 | | 5 | 1.8 | |
| Marital status: | | | | | | | |
| Single | 127 | 38.8 | 157 | 51.3 | 146 | 52.0 | [1]18.31 |
| Married | 172 | 62.8 | 133 | 43.5 | 117 | 41.6 | |
| Widowed | 3 | 0.9 | 2 | 0.7 | 2 | 0.7 | |
| Separated | 4 | 1.2 | 1 | 0.3 | 4 | 1.4 | |
| Divorced | 16 | 4.9 | 12 | 3.9 | 8 | 2.8 | |
| No response | 5 | 1.5 | 1 | 0.3 | 4 | 1.4 | |
| Number of children: | | | | | | | |
| Expecting | 7 | 2.1 | 8 | 2.6 | 8 | 2.8 | |
| Under 6 years | 39 | 11.9 | 29 | 9.5 | 16 | 5.7 | |
| 6 - 12 years | 39 | 11.9 | 33 | 10.8 | 26 | 9.2 | |
| 13 - 18 years | 32 | 9.8 | 22 | 7.2 | 19 | 6.8 | |
| Over 18 years | 23 | 7.0 | 17 | 5.6 | 9 | 3.2 | |
| No response | 233 | 71.3 | 234 | 76.5 | 232 | 82.6 | |
| Father's occupation: | | | | | | | |
| Physician/nurse | 4 | 1.2 | 8 | 2.6 | 14 | 5.0 | [2]60.05 |
| Other health professional | 7 | 2.1 | 6 | 2.0 | 2 | 0.7 | |
| Other professional | 42 | 12.8 | 36 | 11.8 | 28 | 9.9 | |
| Technical occupation | 7 | 2.1 | 16 | 5.2 | 14 | 4.9 | |
| Farmer | 28 | 8.6 | 32 | 10.5 | 25 | 8.9 | |
| Proprietor/manager/supervisor | 68 | 20.8 | 51 | 16.7 | 58 | 20.6 | |
| Skilled labor | 49 | 15.0 | 35 | 11.4 | 44 | 15.6 | |
| Semiskilled or unskilled labor | 53 | 16.2 | 52 | 17.0 | 46 | 16.4 | |
| Clerical occupation | 6 | 1.8 | 6 | 2.0 | 7 | 2.5 | |
| Sales occupation | 21 | 6.4 | 19 | 6.2 | 6 | 2.1 | |
| Public/military service | 19 | 5.8 | 22 | 7.2 | 18 | 6.4 | |
| Unemployed | 3 | 0.9 | 2 | 0.6 | 2 | 0.7 | |
| Retired | 2 | 0.6 | 3 | 1.0 | 0 | - | |
| Deceased | 11 | 3.4 | 10 | 3.3 | 8 | 2.8 | |
| No response | 7 | 2.1 | 8 | 2.6 | 9 | 3.2 | |
| Spouse's occupation: | | | | | | | |
| Physician/Nurse | 10 | 5.5 | 7 | 5.2 | 7 | 5.9 | |
| Other health professional | 5 | 2.7 | 4 | 2.9 | 2 | 1.7 | |
| Other professional | 45 | 24.7 | 22 | 16.3 | 12 | 10.3 | |
| Technical occupation | 10 | 5.5 | 11 | 8.1 | 14 | 11.9 | |
| Farmer | 4 | 2.2 | 5 | 3.7 | 7 | 5.9 | |
| Proprietor/manager/supervisor | 21 | 11.5 | 13 | 9.6 | 12 | 10.3 | |
| Skilled labor | 23 | 12.6 | 12 | 8.9 | 13 | 11.1 | |
| Semi or unskilled labor | 6 | 3.3 | 16 | 11.9 | 12 | 10.3 | |
| Clerical occupation | 5 | 2.7 | 6 | 4.4 | 7 | 5.9 | |
| Sales occupation | 10 | 5.5 | 6 | 4.4 | 4 | 3.4 | |
| Public/military service | 13 | 7.1 | 14 | 10.4 | 10 | 8.5 | |
| Student | 21 | 11.5 | 15 | 11.1 | 11 | 9.4 | |
| Homemaker | 6 | 3.3 | 2 | 1.5 | 1 | 0.9 | |

**Table 53. — Nurse graduates: comparison of selected variables by nomination status — Continued**

| Selected variables | Most promising (N=327) No. | Pct. | Promising (N=306) No. | Pct. | Nonselected (N=281) No. | Pct. | $X^2$ |
|---|---|---|---|---|---|---|---|
| Spouse's occupation cont'd: | | | | | | | |
| Unemployed | 1 | 0.5 | 2 | 1.5 | 3 | 2.6 | |
| Retired | 1 | 0.5 | 0 | - | 1 | 0.9 | |
| Deceased | 1 | 0.5 | 0 | - | 1 | 0.9 | |
| Father's Highest Educational Level: | | | | | | | |
| Elementary school | 42 | 12.9 | 45 | 14.7 | 41 | 14.6 | 18.64 |
| Some high school | 50 | 15.3 | 50 | 16.3 | 43 | 15.3 | |
| High school graduate | 92 | 28.1 | 80 | 26.1 | 77 | 27.4 | |
| Post-high school studies, but no certificate or diploma | 40 | 12.2 | 50 | 16.3 | 40 | 14.2 | |
| Post-high school certificate, diploma, or associate degree | 24 | 7.4 | 14 | 4.6 | 14 | 5.0 | |
| Baccalaureate degree | 30 | 9.2 | 39 | 12.7 | 29 | 10.3 | |
| Master's degree | 21 | 6.4 | 8 | 2.6 | 12 | 4.3 | |
| Doctoral degree | 3 | 0.9 | 2 | 0.7 | 0 | - | |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 20 | 6.1 | 15 | 4.9 | 19 | 6.8 | |
| No reponse | 5 | 1.5 | 3 | 1.0 | 6 | 2.1 | |
| Spouse's highest educational level: | | | | | | | |
| Elementary school | 2 | 1.1 | 0 | - | 3 | 2.5 | |
| Some high school | 0 | - | 5 | 3.7 | 5 | 4.1 | |
| High school graduate | 19 | 10.4 | 21 | 15.4 | 26 | 21.5 | |
| Post-high school studies, but no certificate or diploma | 38 | 20.8 | 30 | 22.1 | 21 | 17.4 | |
| Post-high school certificate, diploma, or associate degree | 29 | 15.8 | 20 | 14.7 | 24 | 19.8 | |
| Baccalaureate degree | 67 | 36.6 | 42 | 30.9 | 29 | 23.9 | |
| Master's degree | 20 | 10.9 | 10 | 7.3 | 6 | 4.9 | |
| Doctoral degree | 1 | 0.5 | 3 | 2.2 | 0 | - | |
| Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.) | 7 | 3.8 | 5 | 3.7 | 7 | 5.8 | |
| High school rank: | | | | | | | |
| Upper 10 percent | 177 | 54.3 | 154 | 50.3 | 89 | 31.7 | [2]47.68 |
| Upper 25 percent | 78 | 23.9 | 95 | 31.0 | 114 | 40.6 | |
| Upper 50 percent | 52 | 15.9 | 35 | 11.4 | 58 | 20.6 | |
| Lower 50 percent | 6 | 1.8 | 16 | 5.2 | 10 | 3.6 | |
| No response | 14 | 4.3 | 6 | 2.0 | 10 | 3.6 | |
| State Board scores: | | | | | | | |
| Pediatric: | | | | | | | |
| Below 400 | 7 | 2.4 | 10 | 3.9 | 22 | 9.7 | [2]63.19 |
| 400 - 599 | 139 | 48.2 | 157 | 60.9 | 165 | 72.7 | |
| 600 and above | 142 | 49.5 | 91 | 35.3 | 40 | 17.6 | |
| Medical: | | | | | | | |
| Below 400 | 3 | 1.0 | 6 | 2.3 | 25 | 11.0 | [2]100.20 |
| 400 - 599 | 121 | 42.0 | 150 | 58.4 | 161 | 70.9 | |
| 600 and above | 164 | 57.1 | 101 | 39.3 | 41 | 18.1 | |
| Surgical: | | | | | | | |
| Below 400 | 7 | 2.4 | 4 | 1.6 | 20 | 8.8 | [2] 69.18 |
| 400 - 599 | 133 | 46.1 | 147 | 57.2 | 164 | 72.2 | |
| 600 and above | 148 | 51.6 | 106 | 41.2 | 43 | 18.9 | |
| Obstetrics: | | | | | | | |
| Below 400 | 4 | 1.4 | 10 | 3.9 | 27 | 11.8 | [2]88.32 |
| 400 - 599 | 133 | 46.1 | 161 | 62.4 | 163 | 71.5 | |
| 600 and above | 151 | 52.6 | 87 | 33.7 | 38 | 16.7 | |
| Psychaitric: | | | | | | | |
| Below 400 | 10 | 3.5 | 10 | 3.9 | 23 | 10.1 | [2]59.71 |

**Table 53. — Nurse graduates: comparison of selected variables by nomination status — Continued**

| Selected variables | Most promising (N=327) No. | Pct. | Promising (N=306) No. | Pct. | Nonselected (N=281) No. | Pct. | $X^2$ |
|---|---|---|---|---|---|---|---|
| State Board scores cont'd: | | | | | | | |
| 400 - 599 | 141 | 49.1 | 167 | 65.0 | 165 | 72.7 | |
| 600 and above | 136 | 47.6 | 80 | 31.1 | 39 | 17.2 | |
| Age decided to become a nurse: | | | | | | | |
| Under 10 years | 50 | 15.3 | 47 | 15.4 | 52 | 18.5 | [1]20.67 |
| 10 - 13 years | 22 | 6.7 | 38 | 12.4 | 34 | 12.1 | |
| 14 - 15 years | 49 | 15.0 | 29 | 9.5 | 34 | 12.1 | |
| 16 - 17 years | 77 | 23.5 | 82 | 26.8 | 69 | 24.6 | |
| Over 18 years | 128 | 39.1 | 110 | 35.9 | 88 | 31.3 | |
| No response | 1 | 0.3 | 0 | - | 4 | 1.4 | |
| Employment status: | | | | | | | |
| Full time in nursing | 276 | 84.4 | 249 | 81.4 | 241 | 85.7 | |
| Part time in nursing | 33 | 10.0 | 28 | 9.1 | 16 | 5.6 | |
| Non-nursing employment | 1 | 0.3 | 3 | 0.9 | 1 | 0.3 | |
| Employed in nursing since graduation, but not presently | 14 | 4.3 | 13 | 4.2 | 15 | 5.3 | |
| Not employed in nursing since graduation | 5 | 1.5 | 12 | 3.9 | 9 | 3.2 | |
| Type of employing agency: | | | | | | | |
| Hospital | 248 | 75.8 | 236 | 77.1 | 212 | 75.4 | |
| Long-term care facility | 15 | 1.5 | 3 | 1.0 | 8 | 2.8 | |
| Government facility | 15 | 4.6 | 20 | 6.5 | 8 | 2.8 | |
| Private clinic | 11 | 3.4 | 5 | 1.6 | 9 | 3.2 | |
| Industry | 4 | 1.2 | 0 | - | 1 | 0.4 | |
| Public health agency | 10 | 3.1 | 4 | 1.3 | 6 | 2.1 | |
| School of nursing | 1 | 0.3 | 0 | - | 3 | 1.1 | |
| School board | 1 | 0.3 | 2 | 0.7 | 0 | - | |
| Unemployed/no response | 32 | 9.8 | 36 | 11.8 | 34 | 12.1 | |
| Position held: | | | | | | | |
| Staff nurse | 265 | 81.0 | 244 | 79.7 | 229 | 81.5 | 14.96 |
| Private duty | 2 | 0.6 | 1 | 0.3 | 0 | - | |
| Assistant head nurse | 3 | 0.9 | 8 | 2.6 | 2 | 0.7 | |
| Head nurse | 16 | 4.9 | 9 | 2.9 | 9 | 3.2 | |
| Supervisor | 7 | 2.1 | 3 | 1.0 | 3 | 1.1 | |
| Instructor | 1 | 0.3 | 5 | 1.6 | 3 | 1.1 | |
| Other | 2 | 0.6 | 2 | 0.7 | 4 | 1.4 | |
| No response | 31 | 9.5 | 34 | 11.1 | 31 | 11.0 | |
| Salary: | | | | | | | |
| Under $6,000 | 20 | 6.1 | 16 | 5.2 | 14 | 5.0 | 12.16 |
| $6,000 - 7,999 | 33 | 10.1 | 36 | 11.8 | 28 | 10.0 | |
| $8,000 - 9,999 | 112 | 34.2 | 92 | 30.1 | 99 | 35.2 | |
| $10,000 - 11,999 | 104 | 31.9 | 100 | 32.7 | 90 | 32.0 | |
| $12,000 - 14,999 | 29 | 8.9 | 23 | 7.5 | 17 | 6.0 | |
| $15,000 - 16,999 | 2 | 0.6 | 1 | 0.3 | 0 | - | |
| $17,000 and above | 3 | 0.9 | 3 | 1.0 | 0 | - | |
| No response | 24 | 7.4 | 35 | 11.4 | 33 | 11.7 | |
| Future plans for practicing nursing: | | | | | | | |
| Continue in nursing in same position | 117 | 35.8 | 121 | 39.5 | 124 | 44.1 | |
| Continue in nursing in different position | 89 | 27.2 | 77 | 25.1 | 73 | 25.9 | |
| Continue nursing education | 184 | 56.2 | 151 | 49.3 | 105 | 37.3 | |
| Quit nursing temporarily | 8 | 2.4 | 13 | 4.3 | 8 | 2.8 | |
| Quit nursing permanently | 6 | 1.8 | 8 | 2.6 | 2 | 0.7 | |
| Change to another field of employment | 4 | 1.2 | 7 | 2.2 | 2 | 0.7 | |
| Membership and participation in professional nursing organizations: | | | | | | | |
| Membership | 136 | 41.5 | 101 | 33.0 | 72 | 25.6 | |

**Table 53. — Nurse graduates: comparison of selected variables by nomination status — Continued**

| Selected variables | Most promising (N = 327) No. | Pct. | Promising (N = 306) No. | Pct. | Nonselected (N = 281) No. | Pct. | $X^2$ |
|---|---|---|---|---|---|---|---|
| Membership and participation in professional nursing organizations cont'd: | | | | | | | |
| Organization: | | | | | | | |
| ANA | 97 | 29.6 | 62 | 20.2 | 51 | 18.1 | |
| Other (e.g., nursing specialty, alumni, honor society, etc.) | 65 | 19.8 | 59 | 19.2 | 38 | 13.5 | |
| Participation: | | | | | | | |
| Attend meetings | 85 | 25.9 | 68 | 22.2 | 57 | 20.2 | |
| Hold office | 7 | 2.1 | 8 | 2.6 | 3 | 1.1 | |

[1] Significant at $p < .05$.
[2] Significant at $p < .001$.

**Table 54. — Nurse graduates: mean frequency ratings of behaviors contained in six performance scales**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership | | | | |
| | 3 | Give praise and recognition for achievement to those under your direction | 4.27 | 833 |
| | 23 | Delegate responsibility for care based on assessment of priorities of nursing care needs *and* the abilities and limitations of available health care personnel. | 4.35 | 825 |
| | 25 | Guide other health team members in planning for nursing care. | 4.05 | 827 |
| | 26 | Accept responsibility for the level of care provided by those under your direction. | 4.33 | 824 |
| | 41 | Remain open to the suggestions of those under your direction and use them when appropriate. | 4.34 | 825 |
| | | Total scale | 4.27 | |
| Critical care | | | | |
| | 11 | Perform technical procedures; e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | 4.66 | 831 |
| | 18 | Use mechanical devices; e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | 4.37 | 830 |
| | 19 | Give emotional support to family of dying patient. | 4.02 | 829 |
| | 27 | Perform appropriate measures in emergency situations. | 4.26 | 825 |
| | 30 | Perform nursing care required by critically ill patients. | 4.22 | 830 |
| | 37 | Recognize and meet the emotional needs of a dying patient. | 3.99 | 827 |
| | 40 | Function calmly and competently in emergency situations. | 4.28 | 821 |
| | | Total scale | 4.23 | |
| Teaching/collaboration | | | | |
| | 1 | Teach a patient's family members about the patient's needs. | 4.17 | 832 |
| | 4 | Teach preventive health measures to patients and their families. | 3.96 | 829 |
| | 5 | Identify and use community resources in developing a plan of care for a patient and his family. | 3.34 | 826 |
| | 12 | Adapt teaching methods and materials to the understanding of the particular audience; e.g., age of patient, educational background, and sensory deprivation. | 4.17 | 825 |
| | 14 | Develop innovative methods and materials for teaching patients. | 3.50 | 828 |
| | 28 | Promote the use of interdisciplinary resource persons. | 3.74 | 788 |
| | 29 | Use teaching aids and resource materials in teaching patients and their families. | 3.49 | 821 |
| | 31 | Encourage the family to participate in the care of the patient. | 4.04 | 825 |
| | 32 | Identify and use resources within your health care agency in developing a plan of care for a patient and his family. | 3.67 | 815 |

**Table 54. — Nurse graduates: mean frequency ratings of behaviors contained in six performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Teaching/collaboration cont'd. | | | | |
| | 38 | Communicate facts, ideas, and professional opinions in writing to patients and their families. | 2.95 | 813 |
| | 39 | Plan for the integration of patient needs with family needs. | 3.86 | 820 |
| | | Total scale | 3.72 | |
| Planning/evaluation | | | | |
| | 2 | Coordinate the plan of nursing care with the medical plan of care. | 4.44 | 827 |
| | 6 | Identify and include in nursing care plans anticipated changes in a patient's condition. | 3.97 | 828 |
| | 7 | Evaluate results of nursing care. | 4.38 | 829 |
| | 9 | Develop a plan of nursing care for a patient. | 4.20 | 830 |
| | 10 | Initiate planning and evaluation of nursing care with others. | 4.02 | 829 |
| | 13 | Identify and include immediate patient needs in the plan of nursing care. | 4.61 | 828 |
| | 36 | Contribute to the plan of nursing care for the patient. | 4.44 | 825 |
| | | Total scale | 4.29 | |
| IPR/communications | | | | |
| | 8 | Promote the inclusion of the patient's decisions and desires concerning his care. | 4.37 | 827 |
| | 15 | Communicate a feeling of acceptance of each patient and a concern for the patient's welfare. | 4.27 | 830 |
| | 16 | Seek assistance when necessary. | 4.88 | 828 |
| | 17 | Help a patient communicate with others. | 4.74 | 829 |
| | 20 | Verbally communicate facts, ideas, and feelings to other health team members. | 4.16 | 818 |
| | 2 | Promote the patients' rights to privacy. | 4.71 | 827 |
| | 22 | Contribute to an atmosphere of mutual trust, acceptance, and respect among other health team members. | 4.73 | 824 |
| | 24 | Explain nursing procedures to a patient prior to performing them. | 4.76 | 829 |
| | 33 | Use nursing procedures as opportunities for interaction with patients. | 4.58 | 824 |
| | 34 | Contribute to productive working relationships with other health team members. | 4.72 | 823 |
| | 35 | Help a patient meet his emotional needs. | 4.50 | 825 |
| | 42 | Use opportunities for patient teaching when they arise. | 4.49 | 825 |
| | | Total scale | 4.58 | |
| Professional development | 67 | Use learning opportunities for ongoing personal and professional growth. | 2.67 | 835 |
| | 68 | Display self-direction. | 2.74 | 832 |
| | 69 | Accept responsibility for own actions. | 2.96 | 837 |
| | 70 | Assume new responsibilities within the limits of capabilities. | 2.85 | 837 |
| | 71 | Maintain high standards of performance. | 2.90 | 837 |
| | 72 | Demonstrate self-confidence. | 2.68 | 837 |
| | 73 | Display a generally positive attitude. | 2.85 | 837 |
| | 74 | Demonstrate knowledge of the legal boundaries of nursing. | 2.58 | 837 |
| | 75 | Demonstrate knowledge of the ethics of nursing. | 2.76 | 837 |
| | 76 | Accept and use constructive criticism. | 2.71 | 837 |
| | | Total scale | 2.77 | |

**Table 55. — Nurse graduates: mean self-appraisal on behaviors contained in five performance scales[1]**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership | | | | |
| | 3 | Give praise and recognition for achievement to those under your direction. | 3.08 | 726 |

See footnote at end of table.

**Table 55. — Nurse graduates: mean self-appraisal on behaviors contained in five performance scales[1] — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership cont'd. | | | | |
| | 23 | Delegate responsibility for care based on assessment of priorities of nursing care needs and the abilities and limitations of available health care personnel. | 3.23 | 708 |
| | 25 | Guide other health team members in planning for nursing care. | 2.81 | 720 |
| | 26 | Accept responsibility for the level of care provided by those under your direction. | 3.12 | 705 |
| | 41 | Remain open to the suggestions of those under your direction and use them when appropriate. | 3.33 | 721 |
| | | Total scale | 3.10 | |
| Critical care | | | | |
| | 11 | Perform technical procedures; e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | 3.35 | 791 |
| | 18 | Use mechanical devices; e.g., oral/nasal suction machine, Gomco, cardiac monitor, respirator, etc. | 3.09 | 771 |
| | 19 | Give emotional support to family of dying patient. | 2.71 | 744 |
| | 27 | Perform appropriate measures in emergency situations. | 2.81 | 791 |
| | 30 | Perform nursing care required by critically ill patients. | 3.14 | 741 |
| | 37 | Recognize and meet the emotional needs of a dying patient. | 2.69 | 720 |
| | 40 | Function calmly and competently in emergency situations. | 2.80 | 794 |
| | | Total scale | 2.94 | |
| Teaching/ collaboration | 1 | Teaching a patient's family members about the patient's needs. | 2.87 | 766 |
| | 4 | Teach preventive health measures to patients and their families. | 2.74 | 736 |
| | 5 | Identify and use community resources in developing a plan of care for a patient and his family. | 2.23 | 633 |
| | 12 | Adapt teaching methods and materials to the understanding of the particular audience; e.g., age of patient, educational background, and sensory deprivations. | 2.90 | 734 |
| | 14 | Develop innovative methods and materials for teaching patients. | 2.40 | 691 |
| | 28 | Promote the use of interdisciplinary resource persons. | 2.59 | 667 |
| | 29 | Use teaching aids and resource materials in teaching patients and their families. | 2.57 | 659 |
| | 31 | Encourage the family to participate in the care of the patient. | 3.00 | 712 |
| | 32 | Identify and use resources within your health care agency in developing a plan of care for a patient and his family. | 2.62 | 656 |
| | 38 | Communicate facts, ideas, and professional opinions in writing to patients and their families. | 2.28 | 500 |
| | 39 | Plan for the integration of patient needs with family needs. | 2.74 | 695 |
| | | Total scale | 2.64 | |
| Planning/evaluation | | | | |
| | 2 | Coordinate the plan of nursing care with the medical plan of care. | 2.95 | 753 |
| | 6 | Identify and include in nursing care plans anticipated changes in a patient's condition. | 2.62 | 724 |
| | 7 | Evaluate results of nursing care. | 2.94 | 770 |
| | 9 | Develop a plan of nursing care for a patient. | 2.98 | 737 |
| | 10 | Initiate planning and evaluation of nursing care with others. | 2.79 | 717 |
| | 13 | Identify and include immediate patient needs in the plan of nursing care. | 3.05 | 772 |
| | 36 | Contribute to the plan of nursing care for the patient. | 3.08 | 763 |
| | | Total scale | 2.93 | |
| IPR/communications | | | | |
| | 8 | Promote the inclusion of the patient's decisions and desires concerning his care. | 3.13 | 752 |
| | 15 | Communicate a feeling of acceptance of each patient and a concern for the patient's welfare. | 2.85 | 767 |

**Table 55. — Nurse graduates: mean self-appraisal on behaviors contained in five performance scales[1] — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| IPR/Communication cont'd. | | | | |
| | 16 | Seek assistance when necessary. | 3.43 | 717 |
| | 17 | Help a patient communicate with others. | 3.46 | 797 |
| | 20 | Verbally communicate facts, ideas, and feelings to other health team members. | 2.90 | 749 |
| | 21 | Promote the patients' rights to privacy. | 3.29 | 791 |
| | 22 | Contribute to an atmosphere of mutual trust, acceptance, and respect among other health team members. | 3.13 | 813 |
| | 24 | Explain nursing procedures to a patient prior to performing them. | 3.45 | 794 |
| | 33 | Use nursing procedures as opportunities for interaction with patients. | 3.32 | 774 |
| | 34 | Contribute to productive working relationships with other health team members. | 3.16 | 812 |
| | 35 | Help a patient meet his emotional needs. | 2.95 | 792 |
| | 42 | Use opportunities for patient teaching when they arise. | 3.16 | 788 |
| | | Total scale | 3.19 | |

[1] The Professional development scale was not included in this table because it is based on a response scale of 1 to 3 rather than 1 to 4, which was the base for the other five scales.

**Table 56. — Nurse graduates: comparisons of self-appraisals of performance on behaviors contained in six performance scales, by school type**

| | AD | | Diploma | | Baccalaureate | | | |
|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | F | p |
| Leadership | | | | | | | | |
| Performance | 3.05 | (0.58) | 3.16 | (0.52) | 3.06 | (0.59) | 3.42 | <.05 |
| Preparation | 2.91 | (0.58) | 3.30 | (0.52) | 2.96 | (0.54) | 36.37 | <.01 |
| Critical Care | | | | | | | | |
| Performance | 2.86 | (0.61) | 3.04 | (0.57) | 2.90 | (0.57) | 7.38 | <.01 |
| Preparation | 2.83 | (0.56) | 3.25 | (0.50) | 2.71 | (0.54) | 82.12 | <.01 |
| Teaching/Collaboration | | | | | | | | |
| Performance | 2.54 | (0.56) | 2.66 | (0.58) | 2.72 | (0.57) | 7.21 | <.01 |
| Preparation | 2.90 | (0.54) | 3.20 | (0.43) | 3.17 | (0.45) | 34.49 | <.01 |
| Planning/Evaluation | | | | | | | | |
| Performance | 2.85 | (0.58) | 2.96 | (0.52) | 3.00 | (0.50) | 5.97 | <.01 |
| Preparation | 3.29 | (0.49) | 3.53 | (0.39) | 3.39 | (0.41) | 24.52 | <.01 |
| IPR/Communications | | | | | | | | |
| Performance | 3.10 | (0.48) | 3.25 | (0.44) | 3.20 | (0.47) | 8.76 | <.01 |
| Preparation | 3.26 | (0.47) | 3.50 | (0.35) | 3.35 | (0.42) | 26.32 | <.01 |
| Professional Development[1] | | | | | | | | |
| Performance | 2.76 | (0.23) | 2.79 | (0.21) | 2.75 | (0.25) | 2.79 | [2] |

[1] The items on the professional development behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1. Nursing school preparation was not evaluated for this scale.
[2] Not significant.

**Table 57. — Nurse graduates: comparisons of self-appraisals of performance on behaviors contained in six performance scales, by geographic region**

| | North Atlantic | | Midwest | | South | | West | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | F | p |
| Leadership | | | | | | | | | | |
| Performance | 3.09 | (0.55) | 3.08 | (0.57) | 3.08 | (0.60) | 3.17 | (0.54) | 0.85 | [1] |
| Preparation | 3.08 | (0.63) | 3.07 | (0.64) | 3.03 | (0.63) | 3.13 | (0.57) | 0.57 | [1] |
| Critical Care | | | | | | | | | | |
| Performance | 2.94 | (0.56) | 2.92 | (0.60) | 2.94 | (0.59) | 2.99 | (0.61) | 0.39 | [1] |
| Preparation | 2.98 | (0.58) | 2.98 | (0.57) | 2.91 | (0.58) | 2.96 | (0.59) | 0.81 | [1] |

**Table 57. — Nurse graduates: comparisons of self-appraisals of performance on behaviors contained in six performance scales, by geographic region — Continued**

| | North Atlantic | | Midwest | | South | | West | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | F | p |
| Teaching/Collaboration | | | | | | | | | | |
| Performance | 2.69 | (0.59) | 2.58 | (0.54) | 2.64 | (0.61) | 2.66 | (0.58) | 1.59 | [1] |
| Preparation | 3.11 | (0.46) | 3.09 | (0.51) | 3.04 | (0.50) | 3.09 | (0.50) | 0.84 | [1] |
| Planning/Evaluation | | | | | | | | | | |
| Performance | 3.00 | (0.54) | 2.86 | (0.52) | 2.92 | (0.58) | 3.00 | (0.49) | 3.36 | <.05 |
| Preparation | 3.44 | (0.41) | 3.41 | (0.46) | 3.39 | (0.48) | 3.40 | (0.41) | 0.58 | [1] |
| IPR/Communications | | | | | | | | | | |
| Performance | 3.22 | (0.43) | 3.17 | (0.47) | 3.13 | (0.48) | 3.24 | (0.47) | 2.02 | [1] |
| Preparation | 3.41 | (0.40) | 3.39 | (0.45) | 3.33 | (0.43) | 3.37 | (0.40) | 1.33 | [1] |
| Professional Development[2] | | | | | | | | | | |
| Performance | 2.77 | (0.22) | 2.77 | (0.24) | 2.77 | (0.23) | 2.78 | (0.22) | 0.16 | [1] |

[1] Not significant.

[2] The items on the professional development behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1. Nursing school preparation was not evaluated for this scale.

**Table 58. — Nurse graduates: comparisons of self-appraisals of performance of behaviors contained in six performance scales, by nomination status**

| | Most promising graduates | | Promising graduates | | Nonselected graduates | | | |
|---|---|---|---|---|---|---|---|---|
| | $\bar{X}$ | (sd) | $\bar{X}$ | (sd) | $\bar{X}$ | (d) | F | p |
| Leadership | | | | | | | | |
| Performance | 3.07 | (0.56) | 3.12 | (0.58) | 3.10 | (0.56) | 0.32 | [1] |
| Preparation | 3.05 | (.64) | 3.11 | (0.59) | 3.06 | (0.65) | 0.71 | [1] |
| Critical Care | | | | | | | | |
| Performance | 2.93 | (0.58) | 2.97 | (0.61) | 2.91 | (0.57) | 0.61 | [1] |
| Preparation | 2.93 | (0.57) | 3.00 | (0.56) | 2.95 | (0.60) | 0.80 | [1] |
| Teaching/Collaboration | | | | | | | | |
| Performance | 2.68 | (0.57) | 2.58 | (0.56) | 2.64 | (0.60) | 1.53 | [1] |
| Preparation | 3.09 | (0.49) | 3.09 | (0.47) | 3.07 | (0.53) | 0.43 | [1] |
| Planning/Evaluation | | | | | | | | |
| Performance | 2.94 | (0.52) | 2.93 | (0.56) | 2.91 | (0.54) | 0.22 | [1] |
| Preparation | 3.41 | (0.45) | 3.41 | (0.44) | 3.40 | (0.44) | 0.39 | [1] |
| IPR/Communication | | | | | | | | |
| Performance | 3.18 | (0.48) | 3.19 | (0.46) | 3.18 | (0.46) | 0.08 | [1] |
| Preparation | 3.39 | (0.44) | 3.40 | (0.39) | 3.33 | (0.45) | 2.25 | [1] |
| Professional Development[2] | | | | | | | | |
| Performance | 2.81 | (0.20) | 2.77 | (0.22) | 2.72 | (0.25) | 6.88 | <.01 |

[1] Not significant.

[2] The items on the professional development behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1. Nursing school preparation was not evaluated for this scale.

**Table 59. — Nurse graduates: mean evaluations of nursing school preparation on behaviors contained in five performance scales**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership | | | | |
| | 3 | Give praise and recognition for achievement to those under your direction. | 2.94 | 762 |
| | 23 | Delegate responsibility for care based on assessment of priorities of nursing care needs *and* the abilities and limitations of available health care personnel. | 3.16 | 760 |
| | 25 | Guide other health team members in planning for nursing care. | 3.07 | 762 |
| | 26 | Accept responsibility for the level of care provided by those under your direction. | 3.07 | 754 |

**Table 59. — Nurse graduates: mean evaluation of nursing school preparation on behaviors contained in five performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership cont'd. | | | | |
| | 41 | Remain open to the suggestions of those under your direction and use them when appropriate. | 3.10 | 762 |
| | | Total scale | 3.07 | |
| Critical care | | | | |
| | 11 | Perform technical procedures; e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | 3.16 | 808 |
| | 18 | Use mechanical devices; e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | 2.84 | 798 |
| | 19 | Give emotional support to family of dying patient. | 3.04 | 788 |
| | 27 | Perform appropriate measures in emergency situations. | 2.79 | 812 |
| | 30 | Perform nursing care required by critically ill patients. | 3.08 | 779 |
| | 37 | Recognize and meet the emotional needs of a dying patient. | 3.13 | 770 |
| | 40 | Function calmly and competently in emergency situations. | 2.75 | 808 |
| | | Total scale | 2.96 | |
| Teaching/ collaboration | 1 | Teach a patient's family members about the patient's needs. | 3.38 | 814 |
| | 4 | Teach preventive health measures to patients and their families. | 3.21 | 789 |
| | 5 | Identify and use community resources in developing a plan of care for a patient and his family. | 3.04 | 743 |
| | 12 | Adapt teaching methods and materials to the understanding of the particular audience; e.g., age of patient, educational background, and sensory deprivations. | 3.25 | 772 |
| | 14 | Develop innovative methods and materials for teaching patients. | 2.86 | 754 |
| | 28 | Promote the use of interdisciplinary resource persons. | 2.90 | 710 |
| | 29 | Use teaching aids and resource materials in teaching patients and their families. | 3.18 | 723 |
| | 31 | Encourage the family to participate in the care of the patient. | 3.26 | 766 |
| | 32 | Identify and use resources within your health care agency in developing a plan of care for a patient and his family. | 3.09 | 724 |
| | 38 | Communicate facts, ideas, and professional opinions in writing to patients and their families. | 2.53 | 607 |
| | 39 | Plan for the integration of patient needs with family needs. | 3.15 | 750 |
| | | Total scale | 3.08 | |
| Planning/ evaluation | 2 | Coordinate the plan of nursing care with the medical plan of care. | 3.36 | 791 |
| | 6 | Identify and include in nursing care plans anticipated changes in a patient's condition. | 3.25 | 778 |
| | 7 | Evaluate results of nursing care. | 3.38 | 800 |
| | 9 | Develop a plan of nursing care for a patient. | 3.65 | 785 |
| | 10 | Initiate planning and evaluation of nursing care with others. | 3.35 | 768 |
| | 13 | Identify and include immediate patient needs in the plan of nursing care. | 3.47 | 804 |
| | 36 | Contribute to the plan of nursing care for the patient. | 3.50 | 785 |
| | | Total scale | 3.41 | |
| IPR/communications | 8 | Promote the inclusion of the patient's decisions and desires concerning his care. | 3.41 | 783 |
| | 15 | Communicate a feeling of acceptance of each patient and a concern for the patient's welfare. | 3.14 | 805 |
| | 16 | Seek assistance when necessary. | 3.55 | 821 |
| | 17 | Help a patient communicate with others. | 3.52 | 816 |
| | 20 | Verbally communicate facts, ideas, and feelings to other health team members. | 3.09 | 772 |
| | 21 | Promote the patients' rights to privacy. | 3.59 | 809 |
| | 22 | Contribute to an atmosphere of mutual trust, acceptance, and respect among other health team members. | 3.19 | 816 |
| | 24 | Explain nursing procedures to a patient prior to performing them. | 3.65 | 810 |

**Table 59. — Nurse graduates: mean evaluation of nursing school preparation on behaviors contained in five performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| IPR/communications cont'd. | | | | |
| | 33 | Use nursing procedures as opportunities for interaction with patients. | 3.47 | 794 |
| | 34 | Contribute to productive working relationships with other health team members. | 3.20 | 320 |
| | 35 | Help a patient meet his emotional needs. | 3.31 | 808 |
| | 42 | Use opportunities for patient teaching when they arise. | 3.05 | 914 |
| | | Total scale | 3.38 | |

**Table 60. — Nurse graduates: evaluation of nursing school preparation on five performance scales: a comparison by school type**

| Scales | AD graduates $\bar{X}$ | (sd) | Diploma graduates $\bar{X}$ | (sd) | Baccalaureate graduates $\bar{X}$ | (sd) | F | p |
|---|---|---|---|---|---|---|---|---|
| Leadership | 2.91 | (0.58) | 3.30 | (0.52) | 2.96 | (0.54) | 36.37 | <.01 |
| Critical care | 2.83 | (0.56) | 3.25 | (0.50) | 2.71 | (0.54) | 82.12 | <.01 |
| Teaching/Collaboration | 2.90 | (0.54) | 3.20 | (0.43) | 3.17 | (0.45) | 34.49 | <.01 |
| Planning/evaluation | 3.29 | (0.49) | 3.53 | (0.39) | 3.39 | (0.41) | 24.52 | <.01 |
| IPR/communications | 3.26 | (0.47) | 3.50 | (0.35) | 3.35 | (0.42) | 26.32 | <.01 |

**Table 61. — Nurse graduates: evaluation of nursing school preparation on five performance scales: a comparison by geographic region**

| Scales | North Atlantic $\bar{X}$ | (sd) | Midwest $\bar{X}$ | (sd) | South $\bar{X}$ | (sd) | West $\bar{X}$ | (sd) | F | p |
|---|---|---|---|---|---|---|---|---|---|---|
| Leadership | 3.08 | (0.63) | 3.07 | (0.64) | 3.03 | (0.63) | 3.13 | (0.57) | 0.57 | (1) |
| Critical care | 2.98 | (0.58) | 2.98 | (0.57) | 2.91 | (0.58) | 2.96 | (0.59) | 0.81 | (1) |
| Teaching/collaboration | 3.11 | (0.46) | 3.09 | (0.51) | 3.04 | (0.50) | 3.09 | (0.50) | 0.84 | (1) |
| Planning/evaluation | 3.44 | (0.41) | 3.41 | (0.46) | 3.39 | (0.48) | 3.40 | (0.41) | 0.58 | (1) |
| IPR/communications | 3.41 | (0.40) | 3.39 | (0.45) | 3.33 | (0.43) | 3.37 | (0.40) | 1.33 | (1) |

[1] Not significant.

**Table 62. — Nurse graduates: evaluation of nursing school preparation on five performance scales: a comparison by nomination status**

| Scales | Most promising $\bar{X}$ | (sd) | Promising $\bar{X}$ | (sd) | Nonselected $\bar{X}$ | (sd) | F | p |
|---|---|---|---|---|---|---|---|---|
| Leadership | 3.05 | (0.64) | 3.11 | (0.59) | 3.06 | (0.65) | 0.71 | (1) |
| Critical care | 2.93 | (0.57) | 3.00 | (0.56) | 2.95 | (0.60) | 0.80 | (1) |
| Teaching/collaboration | 3.09 | (0.49) | 3.09 | (0.47) | 3.07 | (0.53) | 0.43 | (1) |
| Planning/evaluation | 3.41 | (0.45) | 3.41 | (0.44) | 3.40 | (0.44) | 0.39 | (1) |
| IPR/communications | 3.39 | (0.44) | 3.40 | (0.39) | 3.33 | (0.45) | 2.25 | (1) |

[1] Not significant.

**Table 63. — Supervisors of nurse graduates: distribution by sex**

| Sex | Number | Percent |
|---|---|---|
| Female | 656 | 95.5 |
| Male | 25 | 3.6 |
| No response | 6 | 0.9 |
| Total | 687 | 100.0 |

**Table 64. — Supervisors of nurse graduates: distribution by age**

| Age | Number | Percent |
|---|---|---|
| Under 25 | 35 | 5.1 |
| 25 to 34 | 243 | 35.4 |
| 35 to 44 | 193 | 28.1 |
| 45 to 54 | 137 | 19.9 |
| Over 54 | 73 | 10.6 |
| No response | 6 | 0.9 |
| Total | 687 | 100.0 |

**Table 65. — Supervisors of nurse graduates: distribution by basic nursing preparation**

| Basic nursing preparation | Number | Percent |
|---|---|---|
| LPN | 7 | 1.0 |
| RN, diploma | 513 | 74.6 |
| RN, associate degree | 54 | 7.8 |
| RN, baccalaureate | 89 | 12.9 |
| RN, master's | 3 | 0.4 |
| No nursing education (e.g., M.D.'s, or hospital administrators) | 5 | 0.7 |
| No response | 16 | 2.3 |
| Total | 687 | [1]100.0 |

[1] Total may not equal 100 percent because of rounding.

**Table 66. — Supervisors of nurse graduates: distribution by highest educational level attained**

| Highest educational level attained | Number | Percent |
|---|---|---|
| Diploma (hospital school) | 420 | 61.1 |
| Associate degree | 59 | 8.6 |
| Baccalaureate degree in nursing | 121 | 17.6 |
| Baccalaureate degree (B.A. or B.S.) in area other than nursing | 31 | 4.5 |
| Master's degree (M.A., M.N., or M.S.) | 41 | 6.0 |
| Doctorate (Ph.D., Ed.D., or D.N.S.) | 7 | 1.0 |
| No response | 8 | 1.1 |
| Total | 687 | [1]99.9 |

[1] Total may not equal 100 percent because of rounding.

**Table 67. — Supervisors of nurse graduates: distribution by number of years since their most recent nursing education degree was obtained**

| Years since most recent nursing education degree obtained | Number | Percent |
|---|---|---|
| 2 or under | 44 | 6.4 |
| 3 - 5 | 93 | 13.5 |
| 6 - 10 | 131 | 19.1 |
| 11 - 20 | 153 | 22.3 |
| Over 20 | 197 | 28.7 |
| No response | 69 | 10.0 |
| Total | 687 | 100.0 |

**Table 68. — Supervisors of nurse graduates: distribution by title of position**

| Position title | Number | Percent |
|---|---|---|
| Head nurse/assistant | 313 | 45.5 |
| Charge nurse/team leader | 24 | 3.4 |
| Staff nurse | 14 | 2.0 |
| Clinical specialist | 10 | 1.4 |
| Inservice educator | 5 | 0.7 |
| Supervisor | 203 | 29.5 |
| Director of nursing/assistant | 83 | 12.0 |
| Other | 32 | 4.6 |
| No response | 3 | 0.4 |
| Total | 687 | [1]100.0 |

[1] Total may not equal 100 percent due to rounding.

**Table 69. — Supervisors of nurse graduates: distribution by working time patterns[1]**

| Working time patterns | Number | Percent |
|---|---|---|
| Days | 493 | 71.7 |
| Evenings | 61 | 8.8 |
| Nights | 57 | 8.2 |
| Rotation | | |
| Day-evening | 18 | 2.6 |
| Evening-night | 2 | 0.2 |
| Day-evening-night | 48 | 6.9 |
| Flexible | 4 | 0.5 |
| No response | 10 | 1.4 |

[1] Supervisors were not limited to a single response.

**Table 70. — Supervisors of nurse graduates: distribution by time of employment in current health care agency**

| Length of current employment | Number | Percent |
|---|---|---|
| Less than 6 months | 10 | 1.5 |
| 6 months to 1 year | 31 | 4.5 |
| 1 to 3 years | 101 | 14.7 |
| 3 to 5 years | 113 | 16.5 |
| 5 to 10 years | 174 | 25.3 |
| Over 10 years | 253 | 36.8 |
| No response | 5 | 0.7 |
| Total | 687 | 100.0 |

**Table 71. — Supervisors of nurse graduates: distribution by the length of time the graduate was known by the supervisor**

| Length of time graduate known | Number | Percent |
|---|---|---|
| 1 month or less | 2 | 0.3 |
| 2 - 3 months | 24 | 3.5 |
| 4 - 5 months | 44 | 6.4 |
| 6 months or more | 604 | 87.9 |
| No response | 13 | 1.9 |
| Total | 687 | 100.0 |

**Table 72. — Supervisors of nurse graduates: distribution by the length of time the supervisor had supervised the graduate**

| Length of time supervised graduate | Number | Percent |
|---|---|---|
| 1 month or less | 6 | 0.9 |
| 2 - 3 months | 44 | 6.4 |
| 4 - 5 months | 53 | 7.7 |
| 6 months or more | 567 | 82.5 |
| No response | 17 | 2.5 |
| Total | 687 | 100.0 |

**Table 73. — Supervisors of nurse graduates: distribution by direct responsibility for evaluating the graduate's performance**

| Direct responsibility for evaluating graduate | Number | Percent |
|---|---|---|
| Yes | 604 | 87.9 |
| No | 59 | 8.6 |
| No response | 24 | 3.5 |
| Total | 687 | 100.0 |

**Table 74. — Supervisors of nurse graduates: mean frequency ratings of nurse graduates' behaviors contained in five performance scales**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership | | | | |
| | 3 | Gives praise and recognition for achievement to those under his/her direction. | 3.85 | 676 |
| | 23 | Delegates responsibility for care based on assessment of priorities of nursing care needs *and* the abilities and limitations of available health care personnel. | 4.04 | 676 |
| | 25 | Guides other health team members in planning for nusing care. | 4.01 | 670 |
| | 26 | Accepts responsibility for the level of care provided by those under his/her direction. | | |
| | 41 | Remains open to the suggestions of those under his/her direction and uses them when appropriate. | 4.20 | 673 |
| | | Total scale | 4.03 | |
| Critical care | | | | |
| | 11 | Performs technical procedures; e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | 4.68 | 675 |
| | 18 | Uses mechanical devices; e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | 4.31 | 674 |
| | 19 | Gives emotional support to family of dying patient. | 3.95 | 669 |
| | 27 | Performs appropriate measures in emergency situations. | 4.39 | 669 |
| | 30 | Performs nursing care required by critically ill patients. | 4.36 | 675 |
| | 37 | Recognizes and meets the emotional needs of a dying patient. | 3.91 | 663 |
| | 40 | Functions calmly and competently in emergency situations. | 4.35 | 672 |
| | | Total scale | 4.28 | |
| Teaching/collaboration | | | | |
| | 1 | Teaches a patient's family members about the patient's needs. | 4.08 | 682 |
| | 4 | Teaches preventive health measures to patients and their families. | 3.72 | 680 |
| | 5 | Identifies and uses community resources in developing a plan of care for a patient and his family. | 3.13 | 680 |
| | 12 | Adapts teaching methods and materials to the understanding of the particular audience; e.g., age of patient, educational background, and sensory deprivations. | 3.89 | 662 |
| | 14 | Develops innovative methods and materials for teaching patients. | 3.22 | 665 |
| | 28 | Promotes the use of interdisciplinary resource persons. | 3.61 | 656 |
| | 29 | Uses teaching aids and resource materials in teaching patients and their families. | 3.45 | 668 |
| | 31 | Encourages the family to participate in the care of the patient. | 3.76 | 674 |
| | 32 | Identifies and uses resources within your health care agency in developing a plan of care for a patient and his family. | 3.56 | 668 |
| | 38 | Communicates facts, ideas, and professional opinions in writing to patients and their families. | 2.74 | 661 |
| | 39 | Plans for the integration of patient needs with family needs. | 3.70 | 668 |
| | | Total scale | 3.53 | |

**Table 74. — Supervisors of nurse graduates: mean frequency ratings of nurse graduates' behaviors contained in five performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Planning/evaluation | | | | |
| | 2 | Coordinates the plan of nursing care with the medical plan of care. | 4.49 | 674 |
| | 6 | Identifies and includes in nursing care plans anticipated changes in a patient's condition. | 4.14 | 676 |
| | 7 | Evaluates results of nursing care. | 4.27 | 673 |
| | 9 | Develops a plan of nursing care for a patient. | 4.24 | 677 |
| | 10 | Initiates planning and evaluation of nursing care with others. | 4.07 | 671 |
| | 13 | Identifies and includes immediate patient needs in the plan of nursing care. | 4.54 | 671 |
| | 36 | Contributes to the plan of nursing care for the patient. | 4.45 | 675 |
| | | Total scale | 4.31 | |
| IPR/communications | | | | |
| | 3 | Promotes the inclusion of the patient's decisions and desires concerning his care. | 4.20 | 676 |
| | 15 | Communicates a feeling of acceptance of each patient and a concern for the patient's welfare. | 4.81 | 674 |
| | 16 | Seeks assistance when necessary. | 4.64 | 673 |
| | 17 | Helps a patient communicate with others. | 4.17 | 659 |
| | 20 | Verbally communicates facts, ideas, and feelings to other health team members. | 4.69 | 676 |
| | 21 | Promotes the patients' rights to privacy. | 4.69 | 669 |
| | 22 | Contributes to an atmosphere of mutual trust, acceptance, and respect among other health team members. | 4.67 | 671 |
| | 24 | Explains nursing procedures to a patient prior to performing them. | 4.66 | 674 |
| | 33 | Uses nursing procedures as opportunities for interaction with patients. | 4.32 | 669 |
| | 34 | Contributes to productive working relationships with other health team members. | 4.62 | 675 |
| | 35 | Helps a patient meet his emotional needs. | 4.48 | 676 |
| | 42 | Uses opportunities for patient teaching when they arise. | 4.26 | 676 |
| | | Total scale | 4.52 | |

**Table 75. — Supervisors of nurse graduates: mean evaluations of nurse graduates' behaviors contained in six performance scales**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Leadership | | | | |
| | 3 | Gives praise and recognition to those under his/her direction. | 2.72 | 559 |
| | 23 | Delegates responsibility for care based on assessment of priorities of nursing care needs *and* the abilities and limitations of available health care personnel. | 2.87 | 562 |
| | 25 | Guides other health team members in planning for nursing care. | 2.78 | 582 |
| | 26 | Accepts responsibility for the level of care provided by those under his/her direction. | 3.05 | 599 |
| | 41 | Remains open to the suggestions of those under his/her direction and uses them when appropriate. | 2.94 | 604 |
| | | Total scale | 2.87 | |
| Critical care | | | | |
| | 11 | Performs technical procedures; e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | 3.32 | 652 |
| | 18 | Uses mechanical devices; e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | 3.19 | 612 |
| | 19 | Gives emotional support to family of dying patient. | 2.98 | 563 |
| | 27 | Performs appropriate measures in emergency situations. | 3.03 | 647 |

**Table 75. Supervisors of nurse graduates: mean evaluations of nurse graduates' behaviors contained in six performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Critical care cont'd. | | | | |
| | 30 | Performs nursing care required by critically ill patients. | 3.24 | 607 |
| | 37 | Recognizes and meets the emotional needs of a dying patient. | 2.88 | 545 |
| | 40 | Functions calmly and competently in emergency situations. | 2.89 | 652 |
| | | Total scale | 3.06 | |
| Teaching/collaboration | | | | |
| | 1 | Teaches a patient's family members about the patient's needs. | 2.96 | 582 |
| | 4 | Teaches preventive health measures to patients and their families. | 2.76 | 543 |
| | 5 | Identifies and uses community resources in developing a plan of care for a patient and his family. | 2.50 | 407 |
| | 12 | Adapts teaching methods and materials to the understanding of the particular audience; e.g., age of patient, educational background, and sensory deprivations. | 2.88 | 530 |
| | 14 | Develops innovative methods and materials for teaching patients. | 2.48 | 451 |
| | 23 | Promotes the use of interdisciplinary resource persons. | 2.67 | 514 |
| | 29 | Uses teaching aids and resource materials in teaching patients and their families. | 2.68 | 481 |
| | 31 | Encourages the family to participate in the care of the patient. | 2.88 | 523 |
| | 32 | Identifies and uses resources within your health care agency in developing a plan of care for a patient and his family. | 2.68 | 496 |
| | 38 | Communicates facts, ideas, and professional opinions in writing to patients and their families. | 2.39 | 283 |
| | 39 | Plans for the integration of patient needs with family needs. | 2.73 | 521 |
| | | Total scale | 2.70 | |
| Planning/ evaluation | | | | |
| | 2 | Coordinates the plan of nursing care with the medical plan of care. | 3.03 | 625 |
| | 6 | Identifies and includes in nursing care plans anticipated changes in a patient's condition. | 2.75 | 616 |
| | 7 | Evaluates results of nursing care. | 2.87 | 614 |
| | 9 | Develops a plan of nursing care. | 2.94 | 611 |
| | 10 | Initiates planning and evaluation of nursing care with others. | 2.82 | 592 |
| | 13 | Identifies and includes immediate patient needs in the plan of nursing care. | 3.07 | 644 |
| | 36 | Contributes to the plan of nursing care for the patient. | 3.04 | 635 |
| | | Total scale | 2.94 | |
| IPR/communications | | | | |
| | 8 | Promotes the inclusion of the patient's decisions and desires concerning his care. | 2.95 | 591 |
| | 15 | Communicates a feeling of acceptance of each patient and a concern for the patient's welfare. | 3.29 | 674 |
| | 16 | Seeks assistance when necessary. | 3.26 | 650 |
| | 17 | Helps a patient communicate with others. | 2.92 | 591 |
| | 20 | Verbally communicates facts, ideas, and feelings to other health team members. | 3.11 | 670 |
| | 21 | Promotes the patients' rights to privacy. | 3.18 | 655 |
| | 22 | Contributes to an atmosphere of mutual trust, acceptance, and respect among other health team members. | 3.13 | 665 |
| | 24 | Explains nursing procedures to a patient prior to performing them. | 3.29 | 642 |
| | 33 | Uses nursing procedures as opportunities for interaction with patients. | 3.03 | 619 |
| | 34 | Contributes to productive working relationships with other health team members. | 3.00 | 669 |
| | 35 | Helps a patient meet his emotional needs. | 2.98 | 652 |
| | 42 | Uses opportunities for patient teaching when they arise. | 2.91 | 634 |
| | | Total scale | 3.09 | |

**Table 75. — Supervisors of nurse graduates: mean evaluations of nurse graduates' behaviors contained in six performance scales — Continued**

| Scale | Item No. | Item content | $\bar{X}$ | No. |
|---|---|---|---|---|
| Professional development | | | | |
| | 67 | Uses learning opportunities for ongoing personal and professional growth. | 2.62 | 685 |
| | 68 | Displays self-direction. | 2.70 | 685 |
| | 69 | Accepts responsibility for own actions. | 2.86 | 686 |
| | 70 | Assumes new responsibilities within the limits of capabilities. | 2.78 | 685 |
| | 71 | Maintains high standards of performance. | 2.84 | 686 |
| | 72 | Demonstrates self-confidence. | 2.72 | 686 |
| | 73 | Displays generally positive attitude. | 2.81 | 686 |
| | 74 | Demonstrates knowledge of the legal boundaries of nursing. | 2.60 | 685 |
| | 75 | Demonstrates knowledge of the ethics of nursing. | 2.78 | 685 |
| | 76 | Accepts and uses constructive criticism. | 2.71 | 685 |
| | | Total scale | 2.74 | |

**Table 76. — Supervisors of nurse graduates: evaluations of nurse graduates' performance on six performance scales: a comparison by school type**

| Performance scale | AD | Diploma | Bacc. | F | p |
|---|---|---|---|---|---|
| Leadership | | | | | |
| $\bar{X}$ | 2.87 | 2.84 | 2.90 | 0.23 | (1) |
| sd | 0.76 | 0.75 | 0.77 | | |
| Critical care | | | | | |
| $\bar{X}$ | 3.01 | 3.09 | 3.09 | 0.91 | (1) |
| sd | 0.75 | 0.69 | 0.70 | | |
| Teaching/collaboration | | | | | |
| $\bar{X}$ | 2.62 | 2.67 | 2.87 | 7.31 | <.01 |
| sd | 0.72 | 0.65 | 0.70 | | |
| Planning/evaluation | | | | | |
| $\bar{X}$ | 2.86 | 2.94 | 3.05 | 3.30 | <.05 |
| sd | 0.78 | 0.69 | 0.74 | | |
| IPR/communications | | | | | |
| $\bar{X}$ | 3.07 | 3.06 | 3.15 | 0.98 | (1) |
| sd | 0.69 | 0.66 | 0.67 | | |
| Professional development | | | | | |
| $\bar{X}$ | 2.75 | 2.73 | 2.76 | 0.38 | (1) |
| sd | 0.40 | 0.35 | 0.31 | | |

[1] Not significant.

**Table 77. — Supervisors of nurse graduates: evaluations of nurse graduates' performance on six performance scales: a comparison by geographic region**

| Scales | No. Atlantic $\bar{X}$ | (sd) | Midwest $\bar{X}$ | (sd) | South $\bar{X}$ | (sd) | West $\bar{X}$ | (sd) | F | p |
|---|---|---|---|---|---|---|---|---|---|---|
| Leadership | 2.84 | (0.75) | 2.75 | (0.73) | 3.00 | (0.76) | 2.98 | (0.79) | 4.33 | <.05 |
| Critical care | 3.05 | (0.70) | 3.00 | (0.70) | 3.15 | (0.73) | 3.09 | (0.76) | 1.52 | (1) |
| Teaching/collaboration | 2.71 | (0.70) | 2.61 | (0.66) | 2.82 | (0.75) | 2.75 | (0.67) | 3.09 | <.05 |
| Planning/evaluation | 2.92 | (0.76) | 2.90 | (0.69) | 3.04 | (0.76) | 2.93 | (0.76) | 1.30 | (1) |
| IPR/communications | 3.08 | (0.68) | 2.99 | (0.69) | 3.20 | (0.65) | 3.16 | (0.65) | 3.51 | <.05 |
| Professional development[2] | 2.74 | (0.38) | 2.71 | (0.32) | 2.76 | (0.41) | 2.75 | (0.32) | 0.63 | (1) |

[1] Not significant.

[2] The items on the professional behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1.

**Table 78. — Supervisors of nurse graduates: evaluation of nurse graduates' performance on six performance scales: a comparison by nomination status**

| Scales | Most promising | | Promising | | Nonselected | | F | p |
|---|---|---|---|---|---|---|---|---|
| | X | (sd) | X | (sd) | X | (sd) | | |
| Leadership | 2.94 | (0.75) | 2.88 | (0.74) | 2.77 | (0.79) | 3.00 | <.05 |
| Critical care | 3.17 | (0.67) | 3.05 | (0.73) | 2.96 | (0.75) | 4.98 | <.01 |
| Teaching/collaboration | 2.81 | (0.71) | 2.68 | (0.68) | 2.60 | (0.69) | 5.53 | <.01 |
| Planning/evaluation | 3.05 | (0.70) | 2.91 | (0.77) | 2.84 | (0.73) | 4.77 | <.01 |
| IPR/communications | 3.16 | (0.66) | 3.09 | (0.64) | 3.00 | (0.72) | 2.92 | (1) |
| Professional Development[2] | 2.78 | (0.30) | 2.76 | (0.36) | 2.66 | (0.41) | 7.26 | <.01 |

[1] Not significant.

[2] The items on the professional behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1.

**Table 79. — Supervisors of nurse graduates: evaluations of nurse graduates' performance on six performance scales: a comparison by nomination status as selected and nonselected**

| Scales | Selected | | Nonselected | | F | p |
|---|---|---|---|---|---|---|
| | X | (sd) | X | (sd) | | |
| Leadership | 2.91 | (0.74) | 2.77 | (0.78) | 5.16 | <.05 |
| Critical care | 3.11 | (0.70) | 2.95 | (0.75) | 7.06 | <.01 |
| Teaching/collaboration | 2.75 | (0.70) | 2.60 | (0.69) | 7.04 | <.01 |
| Planning/evaluation | 2.99 | (0.73) | 2.84 | (0.73) | 5.69 | <.05 |
| IPR/communications | 3.12 | (0.65) | 3.00 | (0.72) | 4.74 | <.05 |
| Professional development[1] | 2.77 | (0.33) | 2.66 | (0.41) | 7.01 | <.01 |

[1] The items on the professional behaviors scale had a maximum rating of 3 and a minimum rating of 1; all other items had a maximum rating of 4 and a minimum rating of 1.

# Appendix A
# METHODOLOGY

The overall methodological strategy of the entire study Prediction of Successful Nursing Performance was to (1) obtain data from a representative sample of no less than 10 percent of all State-accredited basic schools of nursing in the United States regarding admission practices, evaluation strategies, and prediction of the performance of their 1975 cohort of graduates; and (2) obtain performance evaluations and other performance-relevant data from a sample of those graduates and their immediate superiors in their present employment settings. The methodology for achieving the first of these major objectives is described in the earlier report of the nursing school phase of the study.[1] It should be noted here that the data for this report are based on responses from graduates of 151 schools of nursing, while only 150 schools were included in the nursing school report. This is due to the fact that the data from one nursing school was received too late to be included in the nursing school analysis, but the number of potential and actual respondents among its graduates was sizable and we did not wish to reduce our graduate response rate by eliminating their questionnaires. Moreover, the responses from that school were quite consistent with those of the other schools of nursing with whom it shared significant structural characteristics.

## Selection of Potential Nurse Graduate Respondents

Each participant in the nursing school phase of the study had been asked to (1) supply the names and most recently known addresses of the spring 1975 graduates from her school of nursing; (2) identify from that graduated group, the 25 percent who were "considered as having the greater potential for being successful in nursing practice";[2] and (3) further identify from among that promising group those who were considered "... to have the greatest potential for being successful in nursing practice."[3] Respondents were directed to choose as many or as few for this latter group as they wished. Criteria for nomination to the two groups (who are referred to as "promising" and "most promising" in the body of this report) were not specified. Respondents from the schools of nursing were, in fact, asked to specify the criteria they had used for nomination.[4]

From each total class list, a 20-percent random sample was selected using a table of random numbers and associated sampling procedures.[5] This random sample did, of course, include names of some "most promising" (MP), "promising" (P), and "non-selected" (N-S) graduates. The names of the MP and P graduates who had not appeared in the random sample were also added to the list of potential respondents, thereby "loading" our sample heavily with graduates of probable high caliber. However, this top-heavy loading was entirely consistent with the goals of the project as specified by the Division of Nursing in its original request for proposals. The identifying code number of all potential and actual respondents included whether or not they had been one of the random sample. While almost all the data analysis in this report is based on responses from the total group of graduate respondents, which is acknowledged to be overloaded with graduates of greater potential, it would also be possible to analyze the responses of a genuinely random sample of nurse graduates from that 1975 cohort, if the research question of interest required such an approach.

According to our original projections of the probability of "overlap" between the randomly sampled group and the 25 percent whom the school respondents had nominated as "promising," we anticipated that an average of 40 percent of each class of graduates would

[1] Schwirian, op. cit., Part II, Appendix II.-B, p. 205.
[2] Ibid. Appendix II.-B, p. 208.
[3] Ibid.
[4] Ibid.
[5] Malcolm J. Slakter, *Statistical Inference for Educational Researchers*. Reading, Mass: Addison-Wesley Publishing Co., 1972, table D.

actually be selected as potential respondents. This was, in fact, the case; an overall average of 41 percent of the graduates of the participating nursing schools were asked to participate as nurse graduate respondents.

## Graduate and Supervisor Questionnaires — Purpose and Development

Our problem was to design a set of questionnaires intended to obtain from the cohort of nursing school graduates and from their employers, information relative to the effectiveness of their performance on the job. These questionnaires had to encompass the many diverse occupational settings and positions being held by the new graduates and their supervisors.

The literature review provided an excellent avenue for identifying a wide variety of instruments used in nursing performance studies conducted during the past 10 years. These instruments helped us to clarify and specify the actual data required to meet the study objectives and to suggest formats and content areas that could be considered as alternatives.

The Nursing Graduate Self-Appraisal (see form in appendix B) is comprised of three main sections: Section I obtained data about the graduate's current employment and professional activities since graduation from nursing school; Section II obtained data on the frequency and quality of the graduate's performance of 76 nursing behaviors; and Section III obtained data on the graduate's education, preparation for nursing practice, and general biographical data.

The Employer Appraisal of Nursing Graduate questionnaire contained two sections: Section I obtained the immediate superior's judgment of the frequency and quality of the graduate's performance of the same 76 nursing behaviors that were included in Section II of the Nursing Graduate Self-Appraisal; and Section II obtained general biographical and professional data from the graduate's immediate superior.

When the questionnaire development was completed, the forms were reviewed by Dr. Marlene Kramer, Professor of Nursing, University of California, San Francisco; Rose Hauer, Director of Nursing Service and School of Nursing, Beth Israel Medical Center, New York City; Ruth Fine, Director of Nursing Service, University of Washington Medical Center; Yvonne Munn, Director of Nursing Service, Rush Presbyterian/St. Luke's Medical Center, Chicago; and Martha Haber, Director of Nursing Service, University of California, San Francisco.

## Questionnaire Content Rationale — Nursing Graduate Self-Appraisal

Section I contained questions (items 1-9) relevant to the general employment status and history of the responding nursing graduate. The purpose of collecting these data was to describe the graduates' employment settings as completely as possible. Each item was considered to have direct relevance to the nature and perceived quality of nursing performance, which was the major focus of the study. Items 1, 3, 4, 5, and 6 were directly descriptive of the respondents' job situations. Items 7, 8, and 9 were intended to serve as general indicators of attitude toward the job and toward nursing. The intent was to provide choices indicative of motivations which are both external and internal in nature. The reasons provided for not working in nursing (item 2) were selected on the same basis. A number of the choices were suggested by Kramer since she had found them to be common responses from the recent nursing graduates who were included in her study.

Items 10-16 were designed to assess the graduates' levels of participation and involvement in continuing education efforts and in professional nursing activities and organizations. While such activities presumably are not required in order to obtain and keep a job in nursing, they are commonly viewed as contributing to the quality of a nurse's knowledge and practice. They are also interpreted by some as indicators of the degree of commitment to the nursing profession.

Section II was, in effect, the heart of the questionnaire. It was the operationalization of the major dependent variable of interest—nursing performance. A wide variety of existing performance inventories was studied in the course of the development of this performance tool. The central focus at all times was the development of items that were descriptive of behaviors that contribute to high quality nursing care for clients. Careful study of relevant literature led us to the conclusion that seven categories of nursing behaviors should be represented in the performance rating instru-

ment. These categories were (1) planning nursing care, (2) implementing nursing care, (3) evaluating nursing care, (4) teaching, (5) interpersonal relations, (6) leadership, and (7) professional development. Every effort was made to construct items descriptive of behaviors appropriate to a wide variety of nursing care settings — not just hospitals. While we fully realized that the great majority (approximately 90 percent based on recent findings of Knopf,[6 7] and Nash[8]) would be employed in hospitals, the remaining 10 percent or so could potentially include a large number of actual respondents.

While the items were in the development stage, they were grouped into the seven categories for easy reference. However, in order to minimize respondent bias to a labeled or grouped set of items, the items (with the exception of the professional development category) were randomly ordered in the final questionnaire. The distribution of items in each of the seven categories as originally conceptualized is as follows:

| *Category* | *Item numbers* |
|---|---|
| Planning nursing care | 3, 4, 7, 12, 18, 19, 31, 47, 53, 58, 60, 65 |
| Implementing nursing care | 1, 8, 14, 20, 24, 26, 28, 36, 37, 38, 41, 42, 45, 46, 57, 61 |
| Evaluating nursing care | 10, 15, 49, 22, 52 |
| Teaching | 2, 6, 16, 21, 44, 54, 59, 66 |
| Interpersonal relations | 5, 9, 11, 17, 23, 25, 27, 29, 30, 32, 33, 34, 48, 50, 51, 55, 56, 64 |
| Leadership | 13, 35, 39, 40, 43, 62, 63 |
| Professional development | 67, 76 |

When the performance appraisal was ready for use in the study, it was best described has having had construct validity alone. The limitation of the pilot administration to less than 10 respondents prior to OMB approval precluded a rigorous statistical test of validity or reliability. However, there was general consensus among the developers and a wide variety of consultants and pilot respondents that the behaviors were, in fact, descriptive of nursing behaviors contributory to good client care. Further, content analysis of the questionnaires which were received from participating schools of nursing indicated that the behaviors included in the nursing graduate performance assessment form were representative of the criteria that directors and faculties of schools of nursing had given for "effective nursing performance" and "a successful nurse."

One question we consistently asked our consultants and pilot respondents after their review/use of the questionnaire was whether or not the included behaviors would be likely to provide data that were biased either for or against any of the three types of nursing program graduates; i.e., associate degree, diploma, or baccalaureate. Consultants and respondents agreed that they perceived no bias.

A second validity issue that should be noted is whether or not the items did, indeed, "belong" in the appropriately represented categories which were previously agreed upon by the development group and reviewers. This typological question was addressed in the first stages of data analysis. The classification structure as defined by the original constructs was examined via a principal components analysis of the responses to the performance items. It was anticipated that initial data analysis would also include computation of item reliability estimates, thereby allowing us to eliminate low reliability items from the computed performance scale scores of all respondents. However, certain outcomes of the principal components analysis subsequently omitted this procedure as the basis for eliminating "non-contributing" items. Those procedures and outcomes are described in the analysis section below and are discussed briefly in section II of this report.

It may be seen that there was a frequency-of-performance element, as well as a quality-of-performance element incorporated into each of the items (1-66). The inclusion of a frequency-of-performance element was considered by the staff (and by several of the consultants who commented on it) to be of particular necessity in an instrument which was to apply to nurses practicing in a wide variety of settings as our respondents would probably be doing. One can hardly rate the quality of his/her performance on a task which he/she does not do—either because it is not applicable to the job setting or because it is not expected of a nurse at his/her level of experience. Both of these options for non-performance were provided as responses in Column A.

It may be seen that the directions and format for the last 10 items were modified. A quality-

[6] Lucille Knopf, *From Student to RN: A Report of the Nurse Career Pattern Study*, DHEW Publication No. (NIH) 72-130, 1972.

[7] Lucille Knopf, *RNs: One and Five Years After Graduation*, New York, National League for Nursing, 1975.

[8] Patricia M. Nash, *Evaluation of Employment Opportunities for Newly Licensed Nurses*, DHEW Publication No. (HRA) 75-12, May, 1975.

of-performance component simply is not applicable for such behaviors. One consultant suggested that these behaviors should not be included in the graduates' self-appraisals because they would not be able to provide objective responses anyway. After extensive consideration, it was decided that while in all probability the graduates' responses would be positively biased, the items should remain for several reasons. First, these are behaviors which could be called "good worker" behaviors, and do affect overall nursing performance. Secondly, we told the graduates that their supervisors would be asked to rate them on the same behaviors on which they were rating themselves; therefore, if supervisors rated them on these behaviors, the graduates should be given the same opportunity. Finally, it seemed quite appropriate to consider the hypothesis that a significant discrepancy between supervisor and self-ratings in this category of variables may be manifested in a biased response from the supervisor regarding other nursing behaviors as well. Therefore, an indicator of rating discrepancies between graduates and supervisors on this section was judged as being critical to the establishment of objectivity and validity of the supervisor's evaluations.

The first 12 items in section III were designed to determine various aspects of recent graduates' motivations and attitudes surrounding nursing and their nursing education. Such motivations and attitudes were viewed by the staff and consultants as significantly impinging on a new graduate's performance in nursing. The open-ended format for these questions was chosen so as not to unnecessarily structure or prejudice the graduates' responses. While it was anticipated that most responses would fall into a relatively limited number of categories, we did not wish to lose data by implying such limits. In the questionnaire development stage, our intent was to limit the number of open-ended questions on the assumption that using a checklist is an easier response mode for respondents. Our feedback from our pilot nurse graduate respondents, however, indicated that they really enjoyed answering the open-ended items. Several consultants with research experience in similar areas supported this finding.

Items 13-17 were included because many new graduates reported that while they feel their nursing school curriculum was somewhat limiting (particularly in clinical and technical experience) they were able to develop greater competence and confidence through some employment and/or extracurricular organizational experiences they had while still in school.

Items 18-22 obtained data related to the most typically used indicators of the nursing achievement of new or recent nursing graduates — academic grade point average and State Board Examination scores. While previous research indicates very mixed findings regarding the relationship between grades, State Board Examination scores, and clinical performance, we viewed this as an opportunity to reexamine those relationships in a systematic way with a large, nationally representative sample.

The general biographical data requested in items 23-37 were necessary in order to describe the respondents as completely as possible. While many of these data could have been obtained earlier from student records at the school from which they graduated, this direct questionnaire-based method was selected because (1) the graduates should have the option not to provide the data if they so desire, and (2) we did not wish to add to the already sizable response burden of the participating schools of nursing.

The information at the bottom of page 11 of the questionnaire was necessary to complete the final data collection stage of the study — that of obtaining performance appraisal data from each graduate's immediate supervisor.

## Questionnaire Content Rationale — Employer Appraisal of Nursing Graduate

The content of Section I of the questionnaire (see form in appendix B) was identical to the content of the preceding Nursing Graduate Self-Appraisal form, Section II, with the exception of the appropriately modified directions and the change of all verbs from first to third person. In addition to the rating data, the first three questions were added in order to ascertain the "experience base" from which the immediate supervisor was providing the evaluation data for the nurse graduate.

Section II obtains some very basic data regarding the characteristics and nursing experience of the responding immediate supervisors. These include sex, age, and the nature and recency of nursing and non-nursing education

(items 1-5). The minimal employment data requested in items 6 and 7 were necessary to adequately describe the responding individuals in terms of their tenture and roles in the employing institutions. It also assisted in clarifying the structural relationship between the evaluator and the graduate whose performance he/she was evaluating.

At first glance, item 8 may seem superfluous if one assumes that the graduate and the evaluator were always working the same shift. This was not necessarily the case, particularly in smaller health care agencies. Therefore, the question was relevant and necessary as a possible indicator of how closely the responding evaluator may, in fact, have been in touch with the performance of the graduate.

## Administration of the Questionnaires

All members of the sample of 1975 nurse graduates who had been selected as potential respondents were mailed a copy of the questionnaire and a self-addressed stamped return envelope on March 5, 1976. When a completed nurse graduate questionnaire was returned, assuming the responding graduate gave permission to obtain employer appraisal data, the director of nursing (or equivalent individual) in the graduate's employing institution was promptly mailed a copy of the Employer Appraisal of Nursing Graduate questionnaire and a self-addressed stamped envelope for return. It may be seen on the cover of the Employer Appraisal that a brief explanation of the study was provided to the Director and he/she was requested to give the questionnaire and envelope to the immediate supervisor whom the nurse graduate had identified. The rationale for sending the questionnaire to the Director rather than directly to the immediate supervisor was a strategy suggested by Marlene Kramer, one of our consultants. The general rationale was that the immediate superior might not be permitted by institutional regulations to provide any worker-evaluation data without the director's knowledge and permission. Moreover, we considered it likely that a request from a director might receive attention more promptly than one from an anonymous researcher many, many miles away.

Followup mailings to nurse graduate respondents were necessarily limited by the large number of potential respondents originally identified, and, thus, the resources which would have been required would have been excessive in our judgment (postage alone was $.54 per potential respondent). Therefore, we focused our followup efforts on nurse graduates who were in cells (according to our original stratification procedures for nursing schools) with lower than average response rates. Copies of the two nurse graduate followup letters are included in appendix C. Since the number of potential employer respondents was considerably smaller, we routinely mailed "reminder" letters and new questionnaires and return envelopes to directors of nonresponding immediate supervisors if completed questionnaires had not been received within 1 month of the original mailing.

## Data Analysis

Completed questionnaires from nurse graduates and supervisors were coded by the project staff; the data were keypunched on IBM cards and subsequently written on disk files for computer analysis. The Ohio State University IBM #1370 computer was used. The appropriate subroutines from the *Statistical Package for the Social Sciences (SPSS)* were used to describe and analyze the data. These routines included frequencies, crosstabs, t-tests, condescriptive, breakdown, anova, one-way, factor, Pearson R, and partialcorr.

It should be noted here that while the identity of each respondent was, of necessity, known to the research staff, all data forms—cards, magnetic tape or disk—carried no personal identifiers of schools, nurse graduates, or supervisors. Moreover, at the termination of the contract all lists of names and addresses which could possibly be used to identify data with any particular respondent were destroyed in accordance with the contract specifications as well as appropriate research ethics regarding respondents' right to privacy.

As noted earlier, the determination of content and construction of the 76 nurse-behavior items which were used in the questionnaire were carried out by the staff within the framework of seven general constructs: (1) planning nursing care, (2) implementing nursing care, (3) evaluating nursing care, (4) teaching, (5) interpersonal relations, (6) leadership, and (7) professional development. These were useful constructs which were consistent with the literature as well as the professional judgments of our staff

and consultants.

However, the resulting 76-item performance rating instrument was, in fact, quite cumbersome and two of the many goals of the analysis were to (1) test the validity of our *a priori* constructs in terms of the actual responses of nurse graduates and supervisors; and (2) eliminate items which were the least useful in differentiating between levels of effectiveness in nurse performance, thereby "streamlining" the instrument considerably and making it more useful as both a research and performance evaluation tool.

Therefore, the self-appraisals of performance from the nurse graduates and the performance appraisals from the supervisors were subjected to principal components analyses. The factor structures which resulted from these analyses were very similar to each other. We, therefore, determined that, while the resulting six subscales actually crosscut our seven behavioral constructs as originally conceptualized, the high degree of similarity of factor structure between the nurse graduates' appraisals and the supervisors' appraisals provided a sound data-based rationale for supplanting the original seven behavioral subscales of 76 items with 6 behavioral subscales containing a total of 52 items. The resulting six subscales are (1) interpersonal relations and communications (IPR/C) of 12 items; (2) leadership, containing 5 items; (3) critical care (CC), which has 7 items; (4) teaching and family collaboration (T/FC), 11 items; (5) planning, which contains 7 items; and (6) professional development, 10 items. The items in each subscale are shown in table 75.

One methodological problem arose in determining a functional method for calculating a meaningful, easily interpretable score for each of the six performance subscales. The scales are of different lengths (from 5 up to 12 items); moreover, not every respondent was evaluated on every item if the behavior was not one which was associated with the type of job he/she had. We did not wish to lower a person's scale score just because the job situation did not require the performance of all the behaviors in that scale. To be most succinct, our goal was to calculate a subscale performance score which reflected the level of performance on those scale behaviors on which the nurse graduate was evaluated either by herself or by her supervisor.

The scoring formula which was devised to generate "fair," standardized subscale scores was

$$\frac{\sum x_1 \ldots x_n}{n - m}$$

where

$x_1 \ldots x_n$ = the numerical ratings given to the nurse graduate on each behavior in the subscale,

$n$ = the total number of items in the subscale, and

$m$ = the number of items in the subscale for which the graduate was given no behavior rating.

It may be seen that this is actually an "average" of ratings on behaviors which were, in fact, rated; since it is standardized, we were then able to compare subscale scores between subscales of different lengths.

## Appendix B
# QUESTIONNAIRES USED IN THE STUDY

# *Prediction of Successful Nursing Performance*

OMB #68-S-74075
Expires: 6/30/77

1585 NEIL AVENUE, COLUMBUS, OHIO 43210

Patricia M. Schwirian, Ph.D.
Project Director

(614) 422-3843

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## NURSING GRADUATE SELF-APPRAISAL

We hope the accompanying letter provides you with sufficient detail to secure your participation in the study. Return of the completed appraisal form will convey to us your consent to participate.

The code number which appears on this form has been assigned to you in order to assure the confidentiality of your responses. The specific information you provide will be seen only by members of our staff.

Please respond to the questions on the following pages as completely as you can.

**THANK YOU VERY MUCH FOR YOUR COOPERATION**

2 0 _____ 2

1-20

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SAMPLE

PART III

### SECTION I

**Instructions:** Please circle the appropriate letter(s) to indicate your choice(s) of answers whenever possible. Otherwise, a few words are usually sufficient to answer the question. Please feel free to use additional sheets for more detailed comments if you wish.

1. What is your current employment status? (Please circle as many as apply.)
   - a—I am employed full-time in nursing
   - b—I am employed part-time in nursing (average hrs./wk.:_____)
   - c—I am employed in a non-nursing job
   - d—I have been employed in nursing since graduation, but am not at the present time
   - e—I have not been employed in nursing since graduation

2. If you are not currently employed in nursing, please indicate the reason(s). (Please circle as many as apply.)
   - a—Family responsibilities
   - b—Hours not suitable
   - c—Health reasons
   - d—Employment opportunities limited/not available
   - e—Spouse prefers I do not work
   - f—Economic situation does not require it
   - g—Student
   - h—Hours and pay not adequate for effort made
   - i—I don't like nursing
   - j—Not within reasonable travel distance from nursing institution
   - k—Not type of practice I desire
   - l—In process of moving from present location
   - m—Presently seeking employment
   - n—Other (Please specify:_____)

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**NOTE:** If you are not currently employed in nursing, please proceed to question 9 on page 2.

HEW/PHS CONTRACT NO. HRA N01-NU-44127/OSURF NO. 3970-A1

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| | |
|---|---|
| a b c d e | 21-25 |
| a b c d e | 26-30 |
| f g h i j | 31-35 |
| k l m n | 36-39 |
| (__ __) | 40-41 |

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FOR OFFICE USE ONLY

3. Please describe your present employment.

| TYPE OF EMPLOYING AGENCY (e.g., General Hospital, Public Health Department, Industry, etc.) | YOUR PRIMARY AREA OF NURSING (e.g., Obstetrical, Medical, Psychiatric, etc.) | WORK SITE (e.g., Nursery, Outpatient Clinic, M.D.'s Office, Inpatient Unit, E.R., CCU, etc.) | WHEN DID YOU BEGIN WORK? (Month) | (Year) | |
|---|---|---|---|---|---|
| | | | __ __ | __ __ | 42-51 |
| | | | __ __ | __ __ | 52-61 |

4. What is the type of position you hold?

a—Staff nurse
b—Private duty nurse
c—Assistant head nurse
d—Head nurse
e—Supervisor
f—Instructor
g—Other (Please specify:_____)

__ 62
__ __ 63-64

5. What type of working hours are you required to keep with your present job? (Please circle as many as apply.)

a—Day shift
b—Evening shift
c—Night shift
d—Rotating shifts
e—My hours are flexible and self-determined
f—I am required to work some weekends
g—Other (please specify:_____)

__ __ __ __ __ 65-69
a b c d e
__ __ 70-71
f g
__ __ 72-73

6. What is the best estimate of your current annual salary?

a—Under $6,000
b—$6,000 - $7,999
c—$8,000 - $9,999
d—$10,000 - $11,999
e—$12,000 - $14,999
f—$15,000 - $16,999
g—$17,000 and above

2 1 1-2
__ 3

7. For what reason(s) did you choose your current job in nursing? (Please circle as many as apply.)

a—It is my clinical area of choice.
b—I felt I could benefit from the additional learning experiences.
c—The salary is good.
d—There is a good chance for advancement.
e—The position offers good fringe benefits.
f—Working conditions were favorable.
g—It is a place where I can use my education and abilities.
h—It was the only job available here.
i—I was limited to this locality.
j—I needed the money.
k—As preparation for another job.
l—It is convenient in terms of transportation to and from work.
m—Other (Please specify:_____)

__ __ __ __ __ 4-8
a b c d e
__ __ __ __ __ 9-13
f g h i j
__ __ __ 14-16
k l m
__ __ 17-18

8. Please circle as many as apply to the following statement: "I plan to stay in my current job until I find a job:

a—with more individual status."
b—with higher salary."
c—with better working hours."
d—with chance for advancement."
e—with better working conditions."
f—in the clinical area I prefer."
g—with more professional independence."
h—outside of the nursing field."
i—in a better location."
j—I do not anticipate changing jobs.
k—Other (Please specify:_____)

__ __ __ __ __ 19-23
a b c d e
__ __ __ __ __ __ 24-29
f g h i j k
__ __ 30-31

9. What are your plans concerning practicing nursing in the future?

_____

__ __ 32-33

SAMPLE

10. If you have taken any courses for credit (college or Continuing Education Units) since graduation from nursing school, please list them chronologically, beginning with the first attended after graduation. Please indicate the kind of credit earned.

| Institution or Sponsoring Agency | Major or Subject Studied | Credit Earned # of Semester Hours | # of Quarter Hours | # of CEU's |
|---|---|---|---|---|
| | | — — | — — | — — |
| | | — — | — — | — — |

11. If you have attended workshops, institutes, or courses which carried no credit since your graduation from nursing school, please list them chronologically beginning with the first attended after graduation. DO NOT INCLUDE INSERVICE EDUCATION.

| Institution or Sponsoring Agency | Subject |
|---|---|
| | |
| | |

12. If you anticipate earning any additional certificates, diplomas, or degrees, please circle as many as apply.

a—Associate Degree
(Specify field of study:_____)
b—Baccalaureate degree in nursing
c—Baccalaureate degree in another field
(Specify field of study:_____)
d—Master's degree in nursing
(Specify type of specialty:_____)
e—Master's degree in another field
(Specify field of study:_____)
f—Doctoral degree in nursing
g—Doctoral degree in another field
(Specify field of study:_____)
h—Nurse Practitioner Program
(e.g., Family Nurse Practitioner Program)
i—Other
(Please specify:_____)

13. Please state your reason(s) for pursuing the above designated degree(s).

_____

14. Since your graduation from nursing school, have you presented any workshops, given any speeches, or written any articles pertaining to nursing.
a—No b—Yes
(Please specify:_____
_____)

SAMPLE

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| — — — — | 35-44 |
| — — — — | 45-54 |
| — — — — | 55-58 |
| — — — — | 59-62 |
| 2 2 | 1-2 |
| — | 3 |
| — — | 4-5 |
| — | 6 |
| — | 7 |
| — — | 8-9 |
| — | 10 |
| — — | 11-12 |
| — | 13 |
| — — | 14-15 |
| — | 16 |
| — | 17 |
| — — | 18-19 |
| — | 20 |
| — | 21 |
| — — | 22-23 |
| — — | 24-25 |
| — | 26 |
| — — | 27-28 |
| — — | 29-30 |
| — — | 31-32 |

PART III

75

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15. If you **are currently** a member of any professional nursing organization(s), nursing honor societies, or nursing political action groups, please specify names of organization(s) and indicate the extent of your participation by circling the appropriate number.

| NAME OF ORGANIZATION | HOW OFTEN DO YOU ATTEND MEETINGS? 1—Never 2—Occasionally 3—Regularly | HOLD OFFICE 1—No 2—Yes | | |
|---|---|---|---|---|
| _____ | — | — | __ __ | 33-36 |
| _____ | — | — | __ __ | 37-40 |
| _____ | — | — | __ __ | 41-44 |

16. If you read any of the following professional publications, please indicate your usual pattern of readership. Please check (√) as many as apply to each publication.

| | Read Cover to Cover | Scan | Read Articles of Interest to Me | Read Articles If Recommended by Others | Read as Required for Work or Courses | | |
|---|---|---|---|---|---|---|---|
| *American Journal of Nursing* | _____ | _____ | _____ | _____ | _____ | [2 3] | 1-2 |
| *Nursing Forum* | _____ | _____ | _____ | _____ | _____ | | 3-7 |
| *Nursing Outlook* | _____ | _____ | _____ | _____ | _____ | | 8-12 |
| *Nursing Research* | _____ | _____ | _____ | _____ | _____ | | 13-17 |
| *Nursing '78* | _____ | _____ | _____ | _____ | _____ | | 18-22 |
| *R. N.* | _____ | _____ | _____ | _____ | _____ | | 23-27 |
| *Nursing Clinics of North America* | _____ | _____ | _____ | _____ | _____ | | 28-32 |
| Medical journals | _____ | _____ | _____ | _____ | _____ | | 33-37 |
| Others (specify: | | | | | | | 38-42 |
| _____ | _____ | _____ | _____ | _____ | _____ | __ __ | 43-49 |
| _____) | _____ | _____ | _____ | _____ | _____ | __ __ | 50-56 |

**NOTE:** If you are not presently employed in nursing, please proceed to Section III on page 5.

SAMPLE

## SECTION II

**Instructions:** This section contains a list of activities in which nurses engage with varying degrees of frequency and skill.

**NOTE:** If you have more than one employer, please answer the following questions as they relate to the job to which you devote the most working hours.

1. **IN COLUMN A,** please enter the figure that best describes **how often** you perform the following activities in your current job. Use the key at the top of Column A.
2. **IN COLUMN B,** for those activities that you **do perform** in your current job please enter the figure that tells **how well** you perform them. Use the key at the top of Column B.

**NOTE:** You need not mark anything in Column B for those activities that are not applicable or expected in your job situation.

3. **IN COLUMN C,** please enter the figure that tells how well your nursing school prepared you for this activity. Use the key at the top of Column C.

| | **COLUMN A** How **OFTEN** do you perform these activities in your current job? 1—Not expected at my level of experience 2—Not applicable in my job setting 3—Never or seldom 4—Occasionally 5—Frequently | **COLUMN B** For those activities that you do perform in your current job, how **WELL** do you perform them? 1—Not very well 2—Satisfactorily 3—Well 4—Very well | **COLUMN C** Did your nursing school prepare you for this activity? 1—Not at all 2—Not very well 3—Satisfactorily 4—Very well |
|---|---|---|---|
| Demonstrate consideration of patient welfare, time, energy, economy when performing nursing care. | | | |
| Teach a patient's family members about the patient's needs. | | | |
| Coordinate the plan of nursing care with the medical plan of care. | | | |
| Identify a patient's needs based on factors such as illness, age, cultural background, family, etc. | | | |
| Give praise and recognition for achievement to those under your direction. | | | |
| Teach preventive health measures to patients and their families. | | | |
| Identify and use community resources in developing a plan of care for a patient and his family. | | | |
| Identify and include in nursing care plans anticipated changes in a patient's condition. | | | |
| Use established channels of communication for exchange of information related to patient welfare. | | | |
| Evaluate results of nursing care. | | | |
| Promote the inclusion of the patient's decisions and desires concerning his care. | | | |
| Develop a plan of nursing care for a patient. | | | |
| Initiate planning and evaluation of nursing care with others. | | | |
| Perform technical procedures: e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | | | |
| Evaluate your own nursing practice and take action to improve your clinical expertise. | | | |
| Adapt teaching methods and materials to the understanding of the particular audience: e.g., age of patient, educational background, and sensory deprivations. | | | |
| Help a patient's family meet emotional needs. | | | |
| Identify and include immediate patient needs in the plan of nursing care. | | | |
| Identify the priorities of nursing care for the patient based on needs. | | | |
| Improvise when necessary. | | | |
| Develop innovative methods and materials for teaching patients. | | | |

SAMPLE



5 FOR OFFICE USE ONLY

2 4

1-2
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6-8
9-11
12-14
15-17
18-20
21-23
24-26
27-29
30-32
33-35
36-38
39-41
42-44
45-47
48-50
51-53
54-56
57-59
60-62
63-65

| | COLUMN A<br>How OFTEN do you perform these activities in your current job?<br>1—Not expected at my level of experience<br>2—Not applicable in my job setting<br>3—Never or seldom<br>4—Occasionally<br>5—Frequently | COLUMN B<br>For those activities that you do perform in your current job, how WELL do you perform them?<br>1—Not very well<br>2—Satisfactorily<br>3—Well<br>4—Very well | COLUMN C<br>Did your nursing school prepare you for this activity?<br>1—Not at all<br>2—Not very well<br>3—Satisfactorily<br>4—Very well | 6 | FOR OFFICE USE ONLY |
|---|---|---|---|---|---|
| | | | | 25 | |
| Demonstrate awareness of nursing care problems when they exist and promote planned changes to resolve them. | ____ | ____ | ____ | | 1-2 |
| Communicate a feeling of acceptance of each patient and a concern for the patient's welfare. | ____ | ____ | ____ | | 3-5 |
| Seek assistance when necessary. | ____ | ____ | ____ | | 6-8 |
| Help a patient communicate with others. | ____ | ____ | ____ | | 9-11 |
| Use mechanical devices: e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | ____ | ____ | ____ | | 12-14 |
| Give emotional support to family of dying patient. | ____ | ____ | ____ | | 15-17 |
| Observe, record, and report obvious changes in a patient's condition. | ____ | ____ | ____ | | 18-20 |
| Verbally communicate facts, ideas, and feelings to other health team members. | ____ | ____ | ____ | | 21-23 |
| Communicate facts, ideas, and feelings in writing to other health team members. | ____ | ____ | ____ | | 24-26 |
| Use an organized approach in planning nursing care. | ____ | ____ | ____ | | 27-29 |
| Promote the patients' rights to privacy. | ____ | ____ | ____ | | 30-32 |
| Contribute to an atmosphere of mutual trust, acceptance, and respect among other health team members. | ____ | ____ | ____ | | 33-35 |
| Verbally communicate facts, ideas, and feelings to patients and their families. | ____ | ____ | ____ | | 36-38 |
| Delegate responsibility for care based on assessment of priorities of nursing care needs and the abilities and limitations of available health care personnel. | ____ | ____ | ____ | | 39-41 |
| Provide nursing care for a group of patients. | ____ | ____ | ____ | | 42-44 |
| Explain nursing procedures to a patient prior to performing them. | ____ | ____ | ____ | | 45-47 |
| Observe, record, and report subtle changes in a patient's condition. | ____ | ____ | ____ | | 48-50 |
| Guide other health team members in planning for nursing care. | ____ | ____ | ____ | | 51-53 |
| Accept responsibility for the level of care provided by those under your direction. | ____ | ____ | ____ | | 54-56 |
| Perform nursing care required by non-critically ill patients. | ____ | ____ | ____ | | 57-59 |
| Perform appropriate measures in emergency situations. | ____ | ____ | ____ | | 60-62 |
| Promote the use of interdisciplinary resource persons. | ____ | ____ | ____ | | 63-65 |
| Use teaching aids and resource materials in teaching patients and their families. | ____ | ____ | ____ | | 66-68 |
| Perform nursing care required by critically ill patients. | ____ | ____ | ____ | 26 | 69-71<br>1-2 |
| Encourage the family to participate in the care of the patient. | ____ | ____ | ____ | | 3-5 |
| Identify and use resources within your health care agency in developing a plan of care for a patient and his family. | ____ | ____ | ____ | | 6-8<br>9-11 |
| Use nursing procedures as opportunities for interaction with patients. | ____ | ____ | ____ | | 12-14 |
| Modify nursing care when necessary. | ____ | ____ | ____ | | 15-17 |
| Contribute to productive working relationships with other health team members. | ____ | ____ | ____ | | 18-20 |

SAMPLE

| | | | | |
|---|---|---|---|---|
| Help a patient meet his emotional needs. | ____ | ____ | ____ | 21-23 |
| Use nursing practice as a means of gathering data for further refining and extending practice. | ____ | ____ | ____ | 24-26 |
| Contribute to the plan of nursing care for the patient. | ____ | ____ | ____ | 27-29 |
| Evaluate the effectiveness of patient teaching by observing changes in patient behavior. | ____ | ____ | ____ | 30-32 |
| Recognize and meet the emotional needs of a dying patient. | ____ | ____ | ____ | 33-35 |
| Communicate facts, ideas, and professional opinions in writing to patients and their families. | ____ | ____ | ____ | 36-38 |
| Demonstrate an understanding of the nature, purposes, and effects of medications. | ____ | ____ | ____ | 39-41 |
| Plan for the integration of patient needs with family needs. | ____ | ____ | ____ | 42-44 |
| Identify a patient's immediate and long-range needs for teaching and include them in the plan of nursing care. | ____ | ____ | ____ | 45-47 |
| Identify and include long-term needs of a patient in the plan of nursing care. | ____ | ____ | ____ | 48-50 |
| Function calmly and competently in emergency situations. | ____ | ____ | ____ | 51-53 |
| Evaluate nursing performance of those under your direction. | ____ | ____ | ____ | 54-56 |
| Remain open to the suggestions of those under your direction and use them when appropriate. | ____ | ____ | ____ | 57-59 |
| Recognize anxiety displayed by a patient and take action to alleviate this condition. | ____ | ____ | ____ | 60-62 |
| Establish priorities of nursing care for a group of patients based on needs. | ____ | ____ | ____ | 63-65 |
| Use opportunities for patient teaching when they arise. | ____ | ____ | ____ | 66-68 |

SAMPLE

**Instructions:** Please indicate at the right the number that best describes the frequency with which you engage in the following behaviors. Use the key at the top of that column.

KEY: 1—Seldom or never
2—Occasionally
3—Frequently

| | | |
|---|---|---|
| Use learning opportunities for on-going personal and professional growth. | ____ | 69 |
| Display self-direction. | ____ | 70 |
| Accept responsibility for own actions. | ____ | 71 |
| Assume new responsibilities within the limits of capabilities. | ____ | 72 |
| Maintain high standards of self performance. | ____ | 73 |
| Demonstrate self-confidence. | ____ | 74 |
| Display a generally positive attitude. | ____ | 75 |
| Demonstrate knowledge of the legal boundaries of nursing. | ____ | 76 |
| Demonstrate knowledge of the ethics of nursing. | ____ | 77 |
| Accept and use constructive criticism. | ____ | 78 |



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PART III

FOR OFFICE USE ONLY

## SECTION III

**Instructions:** Please circle the appropriate letter to indicate your choice, otherwise, a few words are usually sufficient to answer the question. Please feel free to use additional sheets for more detailed comments if you wish.

2 7 1-2

1. At what age did you decide to become a nurse?
   a—Before the age of 10
   b—Between 10 and 13 years of age
   c—At 14 or 15 years of age
   d—At 16 or 17 years of age
   e—Since the age of 18

— 3

2. Why did you choose to enter nursing?

— — 4-5

3. Why did you choose the particular type of nursing program from which you just graduated (i.e., associate degree, baccalaureate, or diploma)? If you have graduated from more than one nursing program, please answer these questions with reference to the **most recent** program attended.

— — 6-7

4. Why did you choose the particular nursing school you attended?

— — 8-9

5. What do you consider the greatest strength of your nursing preparation at your nursing school?

— — 10-11

6. What do you consider the greatest weakness of your nursing preparation at your nursing school?

— — 12-13

7. If you feel that the nursing preparation you received at your nursing school needed improvement, what do you think would have helped most to improve it?

— — 14-15

8. If you had it to do over again, would you choose the same school of nursing? a—No b—Yes
   Why?

— 16
— — 17-18

9. If you have it to do over again, would you choose the same type of nursing program? a—No b—Yes
   Why?

— 19
— — 20-21

10. What was your idea of nursing before you entered nursing school?

— — 22-23

11. Did your idea of nursing change between the time you entered nursing school and the time you graduated from nursing school? a—No b—Yes

— 24

12. IF YOU ANSWERED "YES" TO THE PREVIOUS QUESTION, please clarify how your idea of nursing changed:

— — 25-26

13. Were you employed while you were in nursing school? a—No b—Yes

— 27

SAMPLE

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14. IF YOU ANSWERED "YES" TO THE PREVIOUS QUESTION, please specify the type(s) of employment:
_____ __ __ 28-29
_____ __ __ 30-31
_____ __ __ 32-33

15. Do you feel your student employment experiences contributed to your effectiveness as a nurse? a—No b—Yes __ 34
Why? _____ __ __ 35-36
_____

16. Were you a member of any professional nursing organizations or student nurse organizations during nursing school? a—No b—Yes __ 37
Please specify: _____ __ __ 38-39

17. IF YOU ANSWERED "YES" TO THE PREVIOUS QUESTION, did you hold any offices in these organizations? a—No b—Yes __ 40
Please specify: _____ __ __ 41-42

18. What was your final grade point average in the nursing school from which you just graduate? _____ __ __ __ __ 43-46
If this score is based on any grading system other than one in which "A" equals 4.00 points, please explain:
_____ __ __ 47-48

SAMPLE

19. Have you taken State Board Examinations for nursing licensure? a—No b—Yes __ 49

20. IF "NO," are you planning to do so? a—No b—Yes __ 50

21. If you have received your examination scores from your State Board of Nursing, please indicate them below:

| | | |
|---|---|---|
| Medical | __ __ __ | 51-53 |
| Surgical | __ __ __ | 54-56 |
| Obstetrical | __ __ __ | 57-59 |
| Pediatric | __ __ __ | 60-62 |
| Psychiatric | __ __ __ | 63-65 |

22. If you do not as yet have your scores, would you be willing to forward them to us when you receive them? a—No b—Yes __ 66

PART III

**Instructions:** The following general biographical information will be very important in comparing your responses with those of others participating in the study. Please circle the appropriate letter to indicate your answer; otherwise, a few words are usually sufficient to answer the question. Once again, we would like to assure you that all the information which you provide will be held in strict confidence.

2 8 1-2

87

86

23. In what type of community did you live for the longest period of time while you were in high school? __ 3
a—Rural or farm b—Town or small city not near large city c—Suburban area near a large city d—Large city

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24. Please indicate the number of students in your high school graduating class.

a—Under 50 b—50-100 c—100-300 d—Over 300 — 4

25. What was your rank in your high school graduating class?

a—In the upper 10% b—In the upper 25% c—In the upper 50% d—In the lower 50% — 5

26. Did you attend or complete any educational programs after high school graduation but prior to the nursing program from which you have most recently graduated, e.g., business school, LPN program, college in another field, etc. a—No b—Yes — 6

27. IF "YES," please list below the educational program(s) which you attended and/or completed after high school. Begin with the first one; end with the most recent. Exclude the nursing program from which you have just graduated.

| Type of Institution | Major or Subject/s Studied | Duration | Diploma, Certificate or Degree Earned | |
|---|---|---|---|---|
| | | | | 7-13 |
| | | | | 14-20 |

28. What was your father's occupation while you were in high school? (Please be specific.)

_____ — — 21-22

29. What was your mother's occupation while you were in high school?

_____ — — 23-24

30. If you are married, what is the current occupation of your spouse?

_____ — — 25-26

31. Place the appropriate letter on each line at the right to indicate the highest educational level attained by your father, moher, and (if married) your spouse.

a—Elementary school
b—Some high school
c—High school graduate
d—Post-high school studies, but no certificate or diploma
e—Post-high school certificate, diploma, or associate degree
f—Baccalaureate degree
g—Master's degree
h—Doctoral degree
i—Professional degree (e.g., M.D., L.L.D., L.D.S., D.V.M.)
Other (Please specify on the line corresponding to the appropriate person)

Father — — 27-28
Mother — — 29-30
Spouse — — 31-32

32. What is your age?

a—Under 21 b—21-35 c—26-35 d—36-55 e—Over 55 — 33

33. What is your sex?

a—Female b—Male — 34

SAMPLE

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34. What is your racial background?

a—American Indian/Alaskan Native b—Asian or Pacific Islander c—Black/Negro d—Caucasian/White — 35

35. Is your ethnic heritage Hispanic? a—No b—Yes — 36

36. What is your marital status?

a—Single b—Married c—Widowed d—Separated e—Divorced — 37

37. If you have children, please indicate in the line at the right **how many** are in **each age group.**

a—I am presently expecting a child _____
b—Under 6 years _____
c—6-12 years _____
d—13-18 years _____
e—Over 18 years _____

38-42

PART III

SAMPLE

So that we may obtain the cooperation of your employer and forward the Employer Appraisal of Nursing Graduate form to your immediate superior, would you please provide us with the following information:

_____ NAME OF IMMEDIATE SUPERIOR _____ TITLE

_____ NAME OF EMPLOYING INSTITUTION _____ ADDRESS

_____ CITY, STATE _____ ZIP CODE

_____ NAME OF NURSING DIRECTOR (or person of equivalence in your agency) _____ PHONE NUMBER

REMEMBER — all your responses are absolutely confidential.

Thank you very much for completing this form. If you would like to receive a copy of the summary report of information provided by you and other recent nursing graduates, please give us your name and address:

_____

_____

_____

OMB. #68-S-74075
Expires: 6/ 30/ 77

# *Prediction of Successful Nursing Performance*

1585 NEIL AVENUE, COLUMBUS, OHIO 43210

Patricia M. Schwirian, Ph.D.
Project Director (614) 422-3943

## EMPLOYER APPRAISAL OF NURSING GRADUATE

Dear _____:

The determination of effective clinical performance by beginning practitioners in nursing is of great interest to the Division of Nursing of the Department of Health, Education, and Welfare. Consistent with this interest, the Division of Nursing is sponsoring a study, Prediction of Successful Nursing Performance, of which I am the Director. The study is intended to fulfill the need for national information on the relation of success in nursing education to effective nursing performance on the job. Its two major objectives are: (1) to determine the relative effectiveness of predictors of successful nursing performance in use by schools of nursing to evaluate student progress; and (2) to determine the relative effectiveness of predictors of successful nursing performance in use by schools of nursing to determine on-the-job success.

Approximately 150 schools of nursing throughout the United States have participated in the first stage of the study. Members of a select sample of recent graduates from these schools have also participated by providing information about themselves, and an appraisal of their performance in their current nursing positions. _____, who was a participant, selected you as the immediate superior most able to evaluate his/her performance from a supervisory perspective and has given permission for you to provide this information.

SAMPLE

In order to complete the final phase of this important study, we ask that you complete this EMPLOYER APPRAISAL OF NURSING GRADUATE form and return it **to us** in the stamped envelope we have provided. DO NOT RETURN THE FORM TO THE GRADUATE OR TO YOUR DIRECTOR. If you will return the completed appraisal by _____, we will be able to complete our data base for the study.

No specific benefit to you or to your employer will derive from the number and content of your responses; also, no right, benefit, or privilege will be altered or withheld from you because of failure to respond or because of your responses. All responses will remain confidential; publication of all data will be in the aggregate only and will not disclose the identity of individuals. At the conclusion of the study all records which identify your response with your name and address will be destroyed.

Your responses will be seen only by our staff members and are entirely voluntary — you may choose not to supply any information to which you object. We hope the above information provides you with sufficient detail to secure your participation in the study. Return of the completed appraisal form will convey to us your consent to participate.

Thank you very much for your cooperation!

Patricia M. Schwirian, Ph.D.
Project Director

H.E.W. PHS CONTRACT NO. HRA N01-NU-44127 OSURF NO. 3970-A1

3 0 ____ 1-15

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## SECTION I

**Instructions:** Please circle the appropriate number to indicate your choice of answers.

1. How long have you known the graduate whose performance you are evaluating?
   1 —Less than 1 month
   2 —1 month
   3 —2 months
   4 —3 months
   5 —4 months
   6 —5 months
   7 —6 months
   8 —Over 6 months

   FOR OFFICE USE ONLY ___ 16

2. How long has this graduate been under your supervision as a graduate nurse?
   1 —Less than 1 month
   2 —1 month
   3 —2 months
   4 —3 months
   5 —4 months
   6 —5 months
   7 —6 months
   8 —Over 6 months

   FOR OFFICE USE ONLY ___ 17

3. In this job are you the individual who is most commonly responsible for evaluating this graduate's performance?
   1—No 2—Yes

   FOR OFFICE USE ONLY ___ 18

**Instructions:** This section contains a list of activities in which nurses engage with varying degrees of frequency and skill.

1. **IN COLUMN A**, please enter the figure that best describes **how often** this graduate performs the following activities. Use the key at the top of Column A.
2. **IN COLUMN B**, for those activities that this graduate **does** perform, please enter the figure that best describes **how well** he/she performs them. Use the key at the top of Column B.

**NOTE:** You need not mark anything in Column B for those activities that are not applicable to the job setting or are not expected at this graduate's level of experience.

SAMPLE

| | COLUMN A<br>How **OFTEN does this** graduate perform these activities in his/her current job?<br>1—Not expected at level of experience<br>2—Not applicable to job setting<br>3—Never or seldom<br>4—Occasionally<br>5—Frequently | COLUMN B<br>For those activities that this graduate does perform in his/her current job, how **WELL** does he/she perform them?<br>1—Not very well<br>2—Satisfactorily<br>3—Well<br>4—Very well | |
|---|---|---|---|
| 1. Demonstrates consideration of patient welfare, time, energy, and economy when performing nursing care. | — | — | 19-20 |
| 2. Teaches a patient's family members about the patient's needs. | — | — | 21-22 |
| 3. Coordinates the plan of nursing care with the medical plan of care. | — | — | 23-24 |
| 4. Identifies a patient's needs based on factors such as illness, age, cultural background, family, etc. | — | — | 25-26 |
| 5. Gives praise and recognition for achievement to those under his/her direction. | — | — | 27-28 |
| 6. Teaches preventive health measures to patients and their families. | — | — | 29-30 |
| 7. Identifies and uses community resources in developing a plan of care for a patient and his family. | — | — | 31-32 |
| 8. Identifies and includes in nursing care plans anticipated changes in a patient's condition. | — | — | 33-34 |
| 9. Uses established channels of communication for exchange of information related to patient welfare. | — | — | 35-36 |
| 10. Evaluates results of nursing care. | — | — | 37-38 |
| 11. Promotes the inclusion of the patient's decisions and desires concerning his care. | — | — | 39-40 |
| 12. Develops a plan of nursing care for a patient. | — | — | 41-42 |
| 13. Initiates planning and evaluation of nursing care with others. | — | — | 43-44 |
| 14. Performs technical procedures: e.g., oral suctioning, tracheostomy care, intravenous therapy, catheter care, dressing changes, etc. | — | — | 45-46 |
| 15. Evaluates own nursing practice and takes action to improve clinical expertise. | — | — | 47-48 |

| | COLUMN A<br>How **OFTEN does this** graduate perform these activities in his/her current job?<br>1—Not expected at level of experience<br>2—Not applicable to job setting<br>3—Never or seldom<br>4—Occasionally<br>5—Frequently | COLUMN B<br>For those activities that this graduate does perform in his/her current job, how **WELL** does he/she perform them?<br>1—Not very well<br>2—Satisfactorily<br>3—Well<br>4—Very well | |
|---|---|---|---|
| 16. Adapts teaching methods and materials to the understanding of the particular audience: e.g., age of patient, educational background, and sensory deprivations. | ___ | ___ | 49-50 |
| 17. Helps a patient's family meet emotional needs. | ___ | ___ | 51-52 |
| 18. Identifies and includes immediate patient needs in the plan of nursing care. | ___ | ___ | 53-54 |
| 19. Identifies the priorities of nursing care for a patient based on needs. | ___ | ___ | 55-56 |
| 20. Improvises when necessary. | ___ | ___ | 57-58 |
| 21. Develops innovative methods and materials for teaching patients. | ___ | ___ | 59-60 |
| 22. Demonstrates awareness of nursing care problems when they exist and promotes planned changes to resolve them. | ___ | ___ | 61-62 |
| 23. Communicates a feeling of acceptance of each patient and a concern for the patient's welfare. | ___ | ___ | 63-64 |
| 24. Seeks assistance when necessary. | ___ | ___ | 65-66 |
| 25. Helps a patient communicate with others. | ___ | ___ | 67-68 |
| 26. Uses mechanical devices: e.g., suction machine, Gomco, cardiac monitor, respirator, etc. | ___ | ___ | 69-70 |
| 27. Gives emotional support to family of dying patient. | ___ | ___ | 71-72 |
| 28. Observes, records, and reports obvious changes in a patient's condition. | ___ | ___ | 73-74 |
| | | | 31 1-2 |
| 29. Verbally communicates facts, ideas, and feelings to other health team members. | ___ | ___ | 3-4 |
| 30. Communicates facts, ideas, and feelings in writing to other health team members. | ___ | ___ | 5-6 |
| 31. Uses an organized approach in planning nursing care. | ___ | ___ | 7-8 |
| 32. Promotes the patients' rights to privacy. | ___ | ___ | 9-10 |
| 33. Contributes to an atmosphere of mutual trust, acceptance, and respect among other health team members. | ___ | ___ | 11-12 |
| 34. Verbally communicates facts, ideas, and feelings to patients and their families. | ___ | ___ | 13-14 |
| 35. Delegates responsibility for care based on assessment of priorities of nursing care needs **and** the abilities and limitations of available health care personnel. | ___ | ___ | 15-16 |
| 36. Provides nursing care for a group of patients. | ___ | ___ | 17-18 |
| 37. Explains nursing procedures to a patient prior to performing them. | ___ | ___ | 19-20 |
| 38. Observes, records, and reports subtle changes in a patient's condition. | ___ | ___ | 21-22 |
| 39. Guides other health team members in planning for nursing care. | ___ | ___ | 23-24 |
| 40. Accepts responsibility for the level of care provided by those under his/her direction. | ___ | ___ | 25-26 |
| 41. Performs nursing care required by **non**-critically ill patients. | ___ | ___ | 27-28 |
| 42. Performs appropriate measures in emergency situations. | ___ | ___ | 29-30 |
| 43. Promotes the use of interdisciplinary resource persons. | ___ | ___ | 31-32 |
| 44. Uses teaching aids and resource materials in teaching patients and their families. | ___ | ___ | 33-34 |
| 45. Performs nursing care required by critically ill patients. | ___ | ___ | 35-36 |
| 46. Encourages the family to participate in the care of the patient. | ___ | ___ | 37-38 |
| 47. Identifies and uses resources within your health care agency in developing a plan of care for a patient and his family. | ___ | ___ | 39-40 |
| 48. Uses nursing procedures as opportunities for interaction with patients. | ___ | ___ | 41-42 |
| 49. Modifies nursing care when necessary. | ___ | ___ | 43-44 |

SAMPLE

| | COLUMN A<br>How **OFTEN does this** graduate perform these activities in his/her current job?<br>1—Not expected at level of experience<br>2—Not applicable to job setting<br>3—Never or seldom<br>4—Occasionally<br>5—Frequently | COLUMN B<br>For those activities that this graduate does perform in his/her current job, how **WELL** does he/she perform them?<br>1—Not very well<br>2—Satisfactorily<br>3—Well<br>4—Very well | |
|---|---|---|---|
| 50. Contributes to productive working relationships with other health team members. | — | — | 45-46 |
| 51. Helps a patient meet his emotional needs. | — | — | 47-48 |
| 52. Uses nursing practice as a means of gathering data for further refining and extending practice. | — | — | 49-50 |
| 53. Contributes to the plan of nursing care for the patient. | — | — | 51-52 |
| 54. Evaluates the effectiveness of patient teaching by observing changes in patient behavior. | — | — | 53-54 |
| 55. Recognizes and meets the emotional needs of a dying patient. | — | — | 55-56 |
| 56. Communicates facts, ideas, and professional opinions in writing to patients and their families. | — | — | 57-58 |
| 57. Demonstrates an understanding of the nature, purposes, and effects of medications. | — | — | 59-60 |
| 58. Plans for the integration of patient needs with family needs. | — | — | 61-62 |
| 59. Identifies a patient's immediate and long-range needs for teaching and includes them in the plan of nursing care. | — | — | 63-64 |
| 60. Identifies and includes long-term needs of a patient in the plan of nursing care. | — | — | 65-66 |
| 61. Functions calmly and competently in emergency situations. | — | — | 67-68 |
| 62. Evaluates nursing performance of those under his/her direction. | — | — | 69-70 |
| 63. Remains open to the suggestions of those under his/her direction and uses them when appropriate. | — | — | 71-72 |
| | | | 75-79 |
| | | | [32] 1-2 |
| 64. Recognizes anxiety displayed by a patient and takes action to alleviate this condition. | — | — | 3-4 |
| 65. Establishes priorities of nursing care for a group of patients based on needs. | — | — | 5-6 |
| 66. Uses opportunities for patient teaching when they arise. | — | — | 7-8 |

SAMPLE

**Instructions:** Please indicate at the right the number that best describes the frequency with which this graduate engages in the following behaviors. Use the key at the top of that column.

| | 1—Seldom or never<br>2—Occasionally<br>3—Frequently | |
|---|---|---|
| 67. Uses learning opportunities for on-going personal and professional growth. | — | 9 |
| 68. Displays self-direction. | — | 10 |
| 69. Accepts responsibility for own actions. | — | 11 |
| 70. Assumes new responsibilities within the limits of capabilities. | — | 12 |
| 71. Maintains high standards of performance. | — | 13 |
| 72. Demonstrates self-confidence. | — | 14 |
| 73. Displays a generally positive attitude. | — | 15 |
| 74. Demonstrates knowledge of the legal boundaries of nursing. | — | 16 |
| 75. Demonstrates knowledge of the ethics of nursing. | — | 17 |
| 76. Accepts and uses constructive criticism. | — | 18 |

## SECTION II

**Instructions:** In order to complete our data base, please provide us with the following general biographical information. Please respond to each item either by circling the appropriate number(s) to indicate your choice of answers or by providing the information as indicated.

FOR OFFICE USE ONLY

1. Please indicate your sex. 1—Female 2—Male ___ 19

2. Please indicate your age. ___ 20
   1 —Under 20
   2 —20-24
   3 —25-29
   4 —30-34
   5 —35-39
   6 —40-44
   7 —45-49
   8—50-54
   9 —55 or older

3. Please indicate all of the types of nursing programs from which you graduated.
   1 —L.V.N., L.P.N. ___ 21
   2 —R.N., Diploma (Hospital School) ___ 22
   3 —R.N., Associate Degree ___ 23
   4 —R.N., Baccalaureate Degree ___ 24
   5 —R.N., Master's Degree ___ 25
   6 —Doctor of Nursing Science ___ 26
   7 —Other (Specify:_____) ___ ___ 27-28

4. Please indicate the year in which you graduated from your most recent nursing program. _____ ___ ___ 29-30

5. Please indicate **your highest** professional or academic degree. ___ 31
   1 —Diploma (Hospital School)
   2 —Associate Degree
   3 —Baccalaureate Degree in Nursing
   4 —Baccalaureate Degree (B.A. or B.S.) in area **other than** nursing
   5 —Master's Degree (M.A., M.N. or M.S.)
   6 —Doctorate (Ph.D., Ed.D. or D.N.S.)
   —Other (Specify:_____) ___ ___ 32-33

6. Please indicate how long you have been employed at your present health care agency/facility. ___ 34
   1 —Less than 6 months
   2 —6 months to 1 year
   3 —Over 1 year to 3 years
   4 —Over 3 years to 5 years
   5 —Over 5 years to 10 years
   6 —Over 10 years

7. Please indicate the **one** title which best identifies your current position. ___ ___ 35-36
   01 —Head Nurse
   02 —Assistant Head Nurse
   03 —Shift Charge Nurse
   04 —Staff Nurse
   05 —Team Leader
   06 —Clinical Specialist
   07 —Supervisor
   08 —Director of Nursing
   09 —Assistant Director of Nursing
   10 —In-Service Educator
   —Other (Specify:_____) ___ ___ 37-38

8. Please indicate which shift assignment best represents your working schedule. ___ 39
   1 —Permanent day shift
   2 —Permanent evening shift
   3 —Permanent night shift
   4 —Day-evening rotation
   5 —Day-night rotation
   6 —Evening-night rotation
   7 —Rotation on all three shifts
   8 —Other (Specify:_____) ___ ___ 40-41

**REMEMBER** — Your responses are absolutely confidential. 75-79

SAMPLE

Thank you very much for completing this form. If you would like to receive a copy of the summary report of information provided by you and others, please give us your name and address:

_____

_____

_____

## Appendix C

# A CLOSER LOOK AT SELECTED HIGH PREDICTOR SCHOOLS OF NURSING: A SUPPLEMENTARY PROJECT ACTIVITY

## Background

The findings from the third major phase of the total contract study have been reported here. The major question was: "Could nursing school faculty/administrators predict which of their graduates would be more successful in nursing practice one year after graduation?" The answer was a definite "Yes!" The graduates who had been nominated as "most promising" were given the highest ratings by their supervisors on six performance scales; those who were nominated as "promising" were given the next highest ratings; and the graduates who had not been selected were given the lowest ratings. In absolute terms it should be noted that, in general, the supervisors' ratings of graduates were good, but the graduates whom the nursing faculty-administrators predicted would be "better" and "best" *were* "better" and "best."

One procedural change in the contract which had been made relatively early in the conduct of the study was the addition of a series of site visits to selected participating nursing schools having the highest rates of "prediction success." The goal of this procedure was to identify in a less quantified, but more personal way factors which these high predictor schools had in common. However, in March 1977 the additional recommendation was made that a conference of the deans/directors of selected high predictor schools could be used to supplement the investigator's site visits and provide information and insights which would be mutually beneficial to the investigator, the Division, and the participating nursing schools as well.

The final upshot of this methodological deliberation and redeliberation was a combination of (1) a series of three 1-day site visits made by the Project Director to three selected high predictor schools in the Midwest,[1] and (2) a 1-day invitational conference of deans/directors of selected high predictor schools with the Project Director and the Project Officer in Columbus, Ohio, on June 3, 1977. The remainder of this appendix is a brief summary of the observations made by the Project Director during the course of the site visits and the conduct of the conference. In contrast to the rest of the final report, this section is based on relatively "soft" data and the Director's unavoidably subjective observations and interpretations.

## Identification of High Predictor Schools of Nursing

It was necessary to develop some sort of quantifiable index whereby we could determine the relative "prediction success" rates of the participating nursing schools. This had to take into account variabilities in total class size and graduates response rates. It should be recalled that the number of schools that participated was 151 and the number of graduates for whom there were complete data sets (schools, self-appraisal and employer appraisal) was 687; therefore, the "average" number of respondents per school was less than four. If there had been only four respondents per school it would have been quite invalid to identify "high predictor" schools because the sample size per school would have been entirely too small. We therefore established the ground rule that a school of nursing would be considered for identification only if at least 10 of the 1975 graduates from that school had participated and that supervisory ratings were available for those graduates. We realized that employing this ground rule may very well have cut many fine nursing schools from consideration, but the questionable reliability of predictions based on very small numbers really gave us no other choice.

The next step was to calculate the mean supervisor ratings of the nominated and non-nominated graduates of each school which had the minimum number of responding graduates. The mean supervisor ratings were then compared for the nominated and non-nominated

[1] The selection of the midwestern school was prompted by our desire to minimize travel costs.

graduates on the six performance subscales used to measure nurse performance in the study. An instance in which the subscale score of the nominated graduates from a school was significantly higher than that of the non-nominated graduate was considered as one accurate prediction point. Since there were six subscales, a school could have a maximum of six accurate prediction points. Finally, an index was calculated by multiplying the school's number of accurate prediction points times the actual number of nurse graduate respondents from that school. For example, the nominated graduates from School M (N = 4) were given significantly higher ratings than the non-nominated graduates (N =6) on five of the six performance scales. Therefore School M's prediction index was:

5 (# of accurate prediction points) × 10 (# of responding graduates) = 50 (prediction index).

The final result of all this numeric manipulation was the identification of nine high-predictor schools of nursing. They were varied by school type (3 AD, 3 diploma, and 3 baccalaureate), geographic region (2 North Atlantic, 4 Midwest, 1 South, and 2 West), and type of financial support (4 private, 5 public).

## Site Visits to Three High Predictor Schools

After the high predictor schools had been identified according to the procedures described above, the high predictor schools located in the Midwest region were singled out as possible schools for site visits. The four Midwest schools consisted of two diploma programs, one associated degree school, and one baccalaureate school. We decided to visit one program of each type if the director/dean of each school was agreeable. We called them, and each was willing to have the site visit we proposed. These visits were conducted in April and May of 1977 by the Project Director.

*School 1.* — The first school visited was an Associate Degree School of Nursing we shall call ADM. ADM is located in a city of approximately 200,000, and has only been an established program since autumn 1972. The program is a small one; 60 students per year are admitted into the 2-year program (4 acedemic semesters and 1 summer). The community has two other nursing schools — one diploma school and one large program in the State university which is located in the community. The faculty at ADM have all had considerable teaching experience in that community, are well-credentialized, and have strong affiliations with the agencies in which the students have their clinical experience. Admissions to ADM (which are on a competitive basis) are initially processed by the admissions office of the community college of which ADM is one academic unit; the preadmission counseling and actual selection procedures are completed by the director of the school. The modal teaching pattern is team instruction, and students are placed in small groups for their didactic instruction as well as for their clinical instruction. Decisions regarding student progress (or the lack of it) are made by the faculty acting as a committee of the whole. One-year followup studies of the graduates' performance have been conducted regularly since the first class graduated in 1974.

*School 2.* — The second site visit to a high predictor school was conducted at a baccalaureate nursing school we shall refer to as BACM. The contrast between ADM and BACM was almost enough to cause culture shock. BACM is a large nursing school with a baccalaureate program admitting over 150 students per year, a master's program with numerous special areas of study, and the beginnings of a Ph.D. program. The faculty is large and diverse. BACM is part of a very large land grant university which basically dominates the relatively small community in which it is located. The health sciences complex alone is huge; the School of Nursing facilities are located almost centrally within that complex. A discussion with the Dean of BACM indicated that all of her efforts were required in the management of this complex operation, and hence she — unlike the Director of ADM — had little direct contact with the undergraduate nursing students. The major insights gained regarding the factors which contributed to BACM's status as a high predictor school were provided in discussions with the Assistant Dean for Student Affairs, a seven-person committee charged with student personnel decisions, and the Director of Admissions of the University. The state in which BACM is located has a strong "work-study" type of program in all the high schools, so most of the applicants come with some work experience in settings where they have seen nursing practice

first-hand, or perhaps even have participated in some aspects of patient care. The admissions to BACM are made on a competitive basis from a pool of applicants two to three times as large as the number of students which can be admitted. The specific criteria for admissions are set by the student personnel committee referred to earlier; these criteria, in turn, are applied to the applicant pool by the University admissions office, and it is this office that does the actual student selection and admission procedures. The committee members themselves spend a substantial amount of time in preadmissions counseling with prospective applicants with particular emphasis on the notion of what nursing really is—not just the romanticized, traditional stereotypical image which many young people hold. They also make it clear that the academic demands of the BACM program are rigorous and the expectations for student performance are high. These faculty members are aware that many of these discussions result in the students' deciding not to apply to BACM, but they feel this "negative counseling" is functional in assisting students to identify career alternatives they may not have considered before, and to come to grips with a more realistic image of nursing and nursing education at that institution. The attrition rate at BACM is substantially less than 10 percent.

*School 3.* — The last school to be site-visited was a diploma program which was operated in affiliation with a private hospital in a large city. The governing boards and the funding for the school and the hospital were organizationally separate, but the director of the school concurrently held the position of the Assistant Administrator of the hospital in charge of nursing service, so the two units were very closely interrelated in actuality. The school — which we shall call DIPC—was a long-established one with a strong tradition and a great deal of pride in that tradition. The majority of the faculty had graduated from the school and most faculty members also held staff positions on the hospital nursing service. The city in which DIPC is located has many other diploma nursing programs as well as two baccalaureate programs and one associate degree program to prepare nurses. DIPC admits 105 students each year, of the 250 applicants who submit complete applications and materials, on the basis of a series of numeric indicators of potential for academic achievement. The entire program consists of 27 consecutive months of instruction. Class instruction is generally conducted in a team mode and decisions regarding student promotion, retention, dismissal, and readmission are delegated to the faculty team(s) most intimately responsible and knowledgeable about the student(s) involved. Almost all of the students' clinical instruction was accommodated within the affiliated hospital, and the director reported that within the past 2 or 3 years, about one-third of each graduating class had been hired by that hospital in an effort to upgrade the nursing staff from one that had been primarily LPNs a few years ago to one which will be over 60 percent RNs within this year.

## Conference on the Prediction of Successful Nursing Performance

*1. General Description and Goals.* — The conference was convened on Thursday evening, June 2, 1977. The program and list of participants are shown below. The evening session was intended to provide (1) information — since most of the participants had not known all of the study findings; and (2) inspiration to stimulate participants' thoughts for the discussions scheduled for Friday. The conference agenda and list of participants follow:[2]

Thursday, June 2, 1977 (Fawcett Center for Tomorrow):

| | |
|---|---|
| 7:00-9:30 | Dinner followed by a summary report of the study, Prediction of Successful Nursing Performance (HEW/PHS Contract No. HRA-NO1-NU-44127, OSURF Project No. 3970-A1), Patricia Schwirian, Ph.D., Project Director, Associate Professor of Nursing, The Ohio State University and Dr. Susan Gortner, Chief, Nursing Research Branch, Division of Nursing, U.S. Public Health Service, DHEW |

Friday, June 3, 1977 (The Ohio State University School of Nursing, Room 256):

| | |
|---|---|
| 9:00-10:15 | Group discussion: "A Successful Nurse: Criteria and Operational Definitions." Discussion leaders: Pat Schwirian and Sue Basta. |
| 10:15-10:30 | Break |
| 10:30-12:15 | Group discussion: "Implications of Study Findings for Selection, Program Development, and Student and Graduate Evaluation in Schools of Nursing." Discussion leader: Susan Gortner. |
| 12:30-2:00 | Lunch at The Ohio State University Faculty Club |
| 2:15-3:30 | Conference Wrap-Up and Recommendations |

[2]Two of the invited deans from baccalaureate nursing schools were unable to attend because of some last minute problems which required their attention at their own school.

Susan M. Basta
Project Research Associate
University of Cincinnati
Cincinnati, Ohio

Mary Deegan
Christ Hospital
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Mary E. Flowers
Madison Area Technical College
Madison, Wisconsin

Dr. Susan Gortner
Project Officer
Chief, Nursing Research Branch
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Lloydene Grimes
Good Samaritan Hospital and
Medical Center
Portland, Oregon

Louise Hazeltine
Cornell University, New York Hospital
New York, New York

Mae Johnson
Los Angeles Valley College
Van Nuys, California

Janice Roberson
McLennan Community College
Waco, Texas

Dr. Patricia Schwirian
Project Director
The Ohio State University
Columbus, Ohio

Eleanor Walsh
St. Vincent Hospital
Toledo, Ohio

Our goal for the Friday conference sessions was to obtain from the representatives of the high predictor schools insights, ideas, and processes which they shared relevant to the major concerns of the study; i.e., what is a "successful nurse," and how does one go about identifying and preparing individuals for successful nursing performance? The observations and impressions which were obtained during the site visits served as starting points for some discussion elements. Specifically, we would identify procedural and structural factors which we thought we had observed as being important in the high prediction status of the visited schools and asked the assembled deans and directors to validate (or invalidate) our interpretations. This proved to be a productive strategy in achieving the conference goals. The actual discussions focused on

1. trends in nursing practice;
2. the evolving concept of what is a good nurse, and how these changes are reflected in policies and procedures employed by these high predictor nursing schools in the areas of student recruitment, selection, and admission;
3. evaluation of student progress, graduates' performance, and other program outcomes; and
4. program adaptations which can provide for the best set of experiences for students with diverse backgrounds, needs, interests, and talents.

*2. Trends in Nursing and the Evolving Concept of the "Good" Nurse.*— There was general agreement among the participants that a number of very significant changes are occurring in the expectations for nurses—both among employers of nurses and among nurses themselves—which schools of nursing must take into consideration in the conduct of their programs. Increasing value is being placed on nurse behaviors which are typically associated with chronological and emotional maturity. Some of these behaviors would be: risk-taking; the development and practice of independent judgment; a well-developed sense of personal accountability and responsibility for one's own professional growth; and a high degree of self-direction. Clearly these kinds of behaviors are very much in contrast with the "handmaiden" image of the nurse. There is an increasing emphasis on sound cognitive bases for nursing practice in the social, behavioral, physical, and biological sciences which makes firm intellectual demands on those who wish to practice nursing effectively. There are much higher levels of expectations regarding nurses' communication skills—not only with their clients and their families but also with colleagues in the health care systems in which the nurses are practicing. Increased value is being placed on diversity of personal and professional styles and practices, in contrast to the demand for obedience and conformity which had characterized nursing education and practice for so many years. Finally, it was noted that the nurse graduates were exercising more independence

and responsibility in being more thoughtful and selective in their choice of jobs. This seemed to be the case even in areas which had an abundant supply of nurses. One hopeful outcome of this selectivity could be a better match between the employers needs and the nurses' skills, a greater degree of mutual satisfaction and (perhaps) a lower rate of nursing personnel turnover and attrition.

*3. Student Recruitment, Selection, and Admission.*—All participants agreed that their schools' selection/admission procedures had undergone marked change in the relatively recent past (about 6 to 8 years). While former admissions decisionmaking processes were weighted heavily with information from personal interviews, recommendations and similar "soft" date, these schools have moved to a heavy—almost exclusive—reliance on "hard" data. We diagrammed the changes which were described as shown below.

| INTUITIVE | → ADAPTIVE | → COGNITIVE |
|---|---|---|
| ("She just seems like she will really be a good nurse.") | ("It seems that she will 'fit in' and be happy in nursing.") | ("Data from prior performance indicate that she has a high probability of succeeding.") |

The nature of the "hard" data upon which the schools relied varied as necessitated by the nature of their prospective student body. For example, two of the diploma schools looked very closely at high school grades and required applicants to complete the ACT or SAT (for which both schools had established minimum cut-points). The AD schools were usually limited to high school grades, but used them consistently as an initial screening device for applicants. The baccalaureate school—which attracted a substantial number of applicants who already held degrees in areas outside nursing—was able to use an applicant's high school record, college grades, and even the scores on the Graduate Record Examination. Other important elements these people included in their consideration of an applicant's prior academic achievement were consistency of performance and evidence of growth. For example, one AD director pointed out that, while she normally would select out at a very early stage any applicant who had graduated in the lower half of her/his high school graduating class, evidence of more satisfactory achievement in more recent academic work (e.g., some good grades in courses at another college) would be given favorable consideration and the applicant would not be eliminated in the initial screening process.

This move toward heavy reliance on cognitive "predictors" was related to a number of factors. In several programs there had been an all-around "beefing-up" of the academic demands of the nursing curriculum—usually in the science areas. Secondly, the current pressures on admissions officers and committees brought about by having two to three times as many applicants as nursing schools can accept have necessitated sound documentation for the selection decisions that are made. Finally, the participants who have applied a "cognitive screen" have been pleased with the results—lower attrition and more satisfactory levels of performance. They also indicated that this contributed to an improved stature and image for their entire nursing program. It was noted that from time to time students encounter significant personal crises, and those who have shown a higher level of prior academic achievement appear to "weather the storm" more successfully—both in their didactic and clinical studies.

While all these schools employed a cognitively based selection process, some went on to add other strategies. Most still collected the letters of reference for applicants, but there was general agreement that (with a few exceptions) they were not particularly useful. The interview was still adhered to by only one school; however, this was the school which had many college graduates as applicants, so the purpose of the interview was primarily one of tapping the applicant's "motivation." Over the years, two questions have been shown to be most informative about these rather special applicants: "How have you spent your time since college?"; and "What prompted your high school decision to do what you did the first time you went to college?" These questions were often helpful in identifying those applicants who were taking nursing as a poor substitute for a career in medicine and those who were perennial "career shoppers."

Both of these groups of people had proven to have a low probability of program completion even though their academic qualifications were quite adequate.

The final selection-related process which characterized these high-predicator schools was a concern for the congruence between the applicant's personal and professional goals and the philosophy and goals of the nursing school. Preadmission counseling which is not used as a screening device is employed by the schools in an effort to clarify for applicants what nursing is really about and what the school's processes, goals, and expectations are. In one AD program, the director meets personally with small groups of applicants to share this information with them. In one very large baccalaureate program, applicants are encouraged (but not required) to talk with members of the committee charged with making all the major student personnel decisions, including admission, progression, and readmission. One diploma program has a particularly strong preadmissions counseling system for possible advanced placement students (such as LPNs and medical corpsmen) to help them determine if a diploma program is what they really want, or if they should try to move directly into a baccalaureate program instead. One director suggested that a substantial part of nonacademic attrition could be accounted for by a mismatch in goals and students' feelings of "non-belonging" in a particular program. If this is a valid suggestion, goal-clarifying preadmission counseling could play an extremely vital role in the admission process.

*4. Evaluation: Student and Program.*—One notable characteristic shared by the high predictor schools represented in the conference was a high degree of interest and activity in efforts which could be placed in the broad category of "evaluation." Substantial resources in each institution were spent on evaluation activities and the data outcomes were broadly shared and regularly used in decisionmaking.

The evaluation of student progress in these schools had two important characteristics which probably contributed to their above-average ability to predict which of their graduates would be judged more successful after a year in practice; one characteristic is procedural, the other is structural. Procedurally, all students are clearly informed of all terminal and enabling objectives which they must achieve, and evaluation of their progress toward the objectives is regular, frequent, and has continuity in terms of the faculty role in the process. Feedback to the students is prompt and complete. In short, the students know where they are supposed to be going, and know the status of their progress in that direction at all times. Structurally, each school had some individual or faculty committee which "stays with" each student through admission and progression (including the "weeding out" when that becomes necessary). The specific structure of this tracking system varies with the school structure and characteristics. In one school, the Director of Admission is the tracker; in another it was a designated faculty committee chaired by the Assistant Dean for Student Affairs; in the smallest school, it was the director herself in consultation with the entire faculty. We determined that the selection of the "promising" and "most promising" nurse graduates in our study had been made by these individuals and groups who comprised the tracking system.

Since the operational definition of "successful nursing" in our study had been the nurse graduates' performance in their clinical setting, we were interested to know how the conference schools viewed the importance of clinical performance in the composition of the evaluation of student progress, i.e., the grading system. There was a variety of specific policies procedures, and techniques for establishing the particular mixes of grading students for their theory and clinical studies. However, it was generally agreed that even if a student's academic performance were quite satisfactory, but the clinical performance were unsatisfactory or marginal, the student would not progress. Academic performance was a necessary but not sufficient condition for student progress; clinical performance was the telling factor.

The conference participants all shared very firm ideas on the importance of the final evaluation letter that is prepared for each graduate. Obviously, the contents must be shared and agreed upon by the student. Management of such reference materials is now subject to rigorous rights-to-privacy legislation, and must be carried out meticulously. It was agreed that the letters should be as specific as possible regarding the students' best areas of nursing performance. Providing nothing but general, bland, "non-information" serves the

needs of neither graduate nor employer. Some of the directors even specified particular clinical areas and/or work sites for which they felt the graduates were particularly well-suited.

Various aspects of program evaluation received substantial interest and effort in the high-predictor schools. In each school there was someone who was conducting some kind of evaluative or predictive research. It may have been an individual in an administrative position such as the Director of Admissions, or it may have been a regular faculty member with the interest and skills to conduct such inquiry. The most common subject of this internal evaluation was the effectiveness of the schools' selection processes. Other factors which have prompted studies included dissatisfaction with SBTPE performance, problems or dissatisfaction with some element(s) of the curriculum, concerns about admission prerequisites, and curriculum changes which had been made. All the schools conducted followup studies of their graduates' performance. The complexity and frequency of the studies varied widely, but all participants were keenly interested in the most important program product—performance of their graduates.

Two other factors which were related to program evaluation were shared in common by the schools of the conference participants. All had a regular, well-developed program of appraisal of faculty performance. Sources of appraisal data included students, self, faculty colleagues, and nursing colleagues in the affiliating agencies. The second factor was a definite concern for the relationships of the schools with their affiliating agencies. The agency personnel who were involved with the students' clinical instruction process were always informed of terminal objectives of each course, and their input was part of the evaluation process. One school consulted with representatives of affiliating agencies before they made any significant curricular changes. These procedures contribute notably to a mutual understanding of goals and needs among the principals of both school and agency.

*5. Program Adaptations.* — As we noted in the introduction, behaviors which are associated with maturity and experience (e.g., independence, risk-taking, facility in communication, etc.) are being increasingly valued in nursing practice. It is obvious that schools of nursing must provide learning experiences which can enhance the development of these characteristics in their generic students. However, another avenue with great promise of productivity is for the schools to attract and enroll students who already have some of the chronological maturity and nursing or nursing-related experiences. These "career development" students (as they were designated in some programs) would include the LPNs, former medical corpsmen, diploma program graduates, ADN graduates, and individuals who hold degrees in areas other than nursing. They are usually older, often have had nursing care experience, are usually highly motivated, and have clearly defined goals. However, in order to make nursing programs attractive and reasonable for these people, some program adaptations must be made. Many nursing schools do not wish to bother with adaptations, and hence their focus remains almost entirely on the generic nursing student.

All the high predictor schools represented in the conference had well-developed programs for the career development students. As noted earlier, a strong program of preadmission counseling is a vital part of working with career development students in order to maximize congruence between the goals and philosophies of the program and those held by the individuals.

Advanced placement was usually available to these students via the successful completion of challenge examinations which included both didactic and clinical performance components. Some of the participants had identified deficiencies among the career development students in the basic science areas. The students themselves had also recognized these deficiencies, so a special preparatory course was designed to bring their science preparation up to a more satisfactory level. With the exception of this type of "special grouping" of career development students, however, the general pattern is the integration of career development and generic students in all learning activities. In one of the schools, non-baccalaureate RN students and non-nurse baccalaureate graduates were intentionally paired for their community health experience. In one of the diploma programs, a group of incoming LPNs had been kept together on the assumption that a mutual support system would be beneficial in facilitating their adaptation to the program. However, the di-

rector pointed out that the separated group had not been as motivated as integrated LPNs had been, and the grouping definitely was not a growth experience for them.

The schools also used independent study as a means of meeting the special needs of students with more experience in their backgrounds. It was clear, however, that the goal of the independent study was enrichment, not acceleration. In summary, program adaptations and enrichment experiences were provided for career development students, but they are not separated from generic students. The integration was viewed as desirable by both kinds of students, and was recognized as a mutually enriching experience.

## Appendix D

# BIBLIOGRAPHY: REFERENCES USED IN DEVELOPMENT OF STUDY QUESTIONNAIRES AND STRATEGIES FOR ANALYSIS

Both questionnaires — the Nursing Graduate Self-Appraisal and the Employer Appraisal of Nursing Graduate—were developed by the project staff on the basis of a comprehensive literature review and careful study of a wide variety of research and measurement instruments which have been developed by previous researchers. Since we full well realize the complexity of the development of a good instrument for the assessment of nursing performance, we examined the literature thoroughly in hope of finding an already existing scale which: (1) was consistent with the objectives of our study; (2) provided sound data regarding the validity and reliability of such a scale; and (3) was suitable for administration to the two groups on whom this phase of the study focuses—recent nursing graduates and their immediate superiors. Unfortunately, no single item met these criteria simultaneously. The first list of references and materials were used in this process.

The second list of references are those used by the staff in the mechanics and strategies of questionnaire construction.

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Part IV

# NURSE GRADUATE PERFORMANCE: AN IN-DEPTH ANALYSIS OF SELECTED PERTINENT FACTORS

# I. NURSING PREPARATION, JOB UTILIZATION, AND CONGRUENCE OF SELF-APPRAISALS AND EMPLOYER APPRAISALS OF PERFORMANCE

## Background

One of the significant concerns in nursing is the nature and duration of the basic preparation for nursing practice. There are currently three avenues which one may use to become eligible to take registered nurse board examinations in most States—the 2-year associate degree programs, the 3-year diploma programs, and the 4- or 5-year baccalaureate programs. The appropriateness of this variety of preparations is hotly debated inside and outside the nursing profession and many States are giving careful scrutiny to their nurse practice acts with an eye to possible future modification of those acts.

The issue is clearly of great importance; reliable, "hard" data which bear on the issue are sparse. Therefore, the Division of Nursing determined that the portion of the study data relevant to the on-the-job utilization and evaluation of graduates from the three types of basic programs required particularly close analysis and interpretation. The purposes of this section are (1) to report the findings related to the relationship between the type of nursing education program and the utilization of new nurse graduates on the job; and (2) to determine the degree of congruence (or discrepancy) between the job performance appraisals given by the graduates themselves and those given by their employers.

## Findings

*Job Utilization of Nurse Graduates.*—We wished to determine if there were different patterns of employment between graduates of the three types of programs. The elements of employment which were analyzed were employing agency, clinical practice area, hospital worksite (for those employed in hospitals), type of position held 1 year after graduation, working hours, and salary. The data from these analyses are shown in tables 4.1-4.6.

Among this sample of 914 nurse graduates, 76 percent were employed in hospitals; the diploma graduates had the highest rate of hospital employment. Baccalaureate graduates had the highest rates of employment in government and public health and the lowest rates of employment in long-term care facilities and private settings such as clinics, offices, etc.

In terms of the graduates' clinical area of practice, the highest proportion of diploma graduates were practicing in areas of medical and surgical nursing (singly and combined); the lowest group in this area was that of baccalaureate graduates. With the exception of pediatric nursing, school graduates were evenly represented; the proportion of baccalaureate graduates in pediatric nursing was double that in either of the other two graduate groups.

The data in table 4.3 show that there were virtually no differences in the unit assignments of nurse graduates from different types of schools. A slightly higher proportion of baccalaureate graduates worked in ICU and CCU areas than of AD or diploma graduates, but the differences are not significant.

The overwhelming majority of the nurse graduates held staff nurse positions after 1 year. The relatively lower proportion of AD graduates who were staff nurses is simply a reflection of the fact that the ADs had the highest unemployment rate. It is interesting to note that 11 percent of the AD graduates held positions of assistant head nurse, head nurse, and supervisor — almost 3 times as many as either among diploma or baccalaureate graduates. This suggests that those people could have been LPNs with a significant amount of nursing experience, and completion of the AD enabled them to obtain RN licensure and move directly into a supervisory position for which they formerly would have been uncredentialized.

Finally, we examined the data regarding the working hours and salaries of the graduates in terms of their school type. These data are shown in tables 4.5 and 4.6. Assigned working hour patterns were generally similar for graduates from all three types of schools; however baccalaureate graduates appear to have fewer evenings and nights as part of their work assignment. The modal income category for AD

and diploma graduates was $8,000-$9,999; the modal category for baccalaureate graduates was $10,000-$11,999. The general pattern of these data shows that the baccalaureate graduates as a group earned higher salaries than AD or diploma graduates.

*Congruence of Self-Appraisals and Employer Appraisals of Nursing Performance.*—Appraisals of nursing performance of the participating nurse graduates were obtained from the graduates themselves (N = 914) and the immediate superiors of 75 percent of those graduates. We wished to determine the extent of congruence or discrepancy between the appraisals the graduates gave themselves in the six performance areas and those their supervisors gave them. Tables 4.7 and 4.8 show the comparisons of mean self-appraisal and empoyer appraisal subscale scores for the graduates for whom both sets of data were available (N = 687).

Data in table 4.7 show that graduates from all three types of programs overrated themselves on the Leadership scale; the self-employer means were significantly different for diploma and baccalaureate graduates. Graduates from all three types of schools underrated their own performance in the Critical Care area — those from AD and baccalaureate schools significantly so.

All three groups of graduates underrated their performance in Teaching/Coilaboration and Planning/Evaluation, but none of the differences was statistically significant. All graduates, particularly the diploma group, tended to overrate their performance in IPR/Communications and Professional Development.

Data in table 4.8 show the comparisons of mean self-appraisals and mean employer appraisals broken down by nomination status as most promising, promising, and nonselected. The most promising graduates overrated themselves slightly on three subscales and underrated themselves significantly in three areas; i.e., Critical Care, Teaching/Collaboration, and Planning/Evaluation. Both the "promising" and the nonselected groups overrated themselves significantly on the Leadership and IPR/Communications subscales.

A second approach to an analysis of the congruence or lack of congruence between self-appraisals of performance and employer appraisals is shown in table 4.9. The purpose of this analysis was to determine the extent to which three selected independent variables collectively and individually explained variations in self/supervisor rating discrepancies among the graduates for whom both self-appraisals and supervisor appraisals were available. A "discrepancy score" was computed for each subscale for each respondent simply by subtracting the supervisor appraisal score from the self-appraisal score for the same subscale. Six dependent variables were thus defined. We then ran a series of six multiple regressions — one for each subscale—with three selected independent variables: school type, nomination status, and worksite for hospital-employed nurses.

The results of the multiple regression (presented in table 4.9) of the Leadership self/supervisor discrepancy score on three independent variables show that only a small amount of the variance is explained by those independent variables. The R is .13, thereby indicating that less than 2 percent of the variance is explained. Thus, it is evident that school type, nomination status, and hospital worksite did not account for differences in discrepancies between self-appraisals and employer appraisals of nurse graduate performance. The remainder of the data in table 4.9 reveals a similar pattern for the remaining five performance subscales. While these three selected variables explained very little of the discrepancy variance, it should be kept in mind that the order of magnitude of the actual self/employer scale score differences were quite small (means ranged from .69 to .40) so there really was not much variance to be explained.

## Summary

The purposes of this section were to (1) determine the nature of the relationship between the type of nursing education program and the utilization of the recent nurse graduate on the job, and (2) examine the degree of congruence between the job performance ratings which graduates gave themselves and those given by their supervisors. Findings were:

- Graduates from diploma programs reported the highest rate of employment in hospital settings.
- The highest proportion of diploma graduates (64 percent) was in medical-surgical areas of practice; the lowest proportion of

baccalaureate graduates (52 percent) was similarly engaged. The highest proportion of baccalaureate graduates (16 percent) was in pediatrics. Other clinical areas showed no differences.

- There were virtually no differences by school type in the hospital unit assignments of the nurse graduates.
- More than 80 percent of all responding nurse graduates held staff nurse positions 1 year after graduation. No statistically significant differences in positions were observed between graduates of the three different types of programs.
- Baccalaureate graduates had fewer evening and night assignments, and their level of pay was the highest.
- Comparisons of graduates self-appraisal scores and those from their supervisors showed that graduates from all three types of programs overrated themselves on Leadership; diploma and baccalaureate graduates' differences were statistically significant.
- By contrast all graduates underrated their performance on the Critical Care subscale.
- All graduates—particularly those from diploma programs—overrated their performance in Interpersonal Relations/ Communications and in Professional Development.
- Graduates who had been nominated by their nursing school faculty/administration as "most promising" tended to underrate their own performance (three performance areas) and the graduates who were "promising" and "non-selected" tended to overrate theirs (two performance areas).
- A self/supervisor discrepancy rating was computed by simple subtraction. A multiple regression showed that very little of the variance in the discrepancy between the graduates' self-appraisals and those from their supervisors was explained by school type, nomination status, and worksite for hospital-employed nurses.

# II. THE NURSE GRADUATES: CHOICE OF SCHOOL AND CHOICE OF JOB

## Background

The purpose of this section is to report the analysis of variables which influenced the choices of the nurse graduates in terms of the nursing schools they had attended, the jobs they took after graduation, and factors which could influence them to leave the jobs they held 1 year after graduation.

The data regarding the graduates' reasons for having chosen the type of nursing school they had attended, as well as the particular school they had attended, were obtained by means of two open-ended questions: "Why did you choose the particular type of nursing program from which you just graduated (i.e., associate degree, baccalaureate, or diploma)?" and "Why did you choose the particular nursing school you attended?" The resulting responses were categorized by the project staff into seven major groups, as follows:

1. reasons of expediency, e.g., length of program, costs, already accumulated credits, etc;
2. reasons of geographic proximity to their place of residence;
3. recommendations for the school received from others such as high school counselors, former graduates of the program, family members, friends, and significant others;
4. program quality—a very broad term and difficult to interpret specifically, but often in the case of diploma graduates it translated into "more clinical experience";
5. potential for career advancement in nursing;
6. reasons of personal fulfillment and interest; and
7. of course, the ubiquitous "other" into which one places those responses that really don't belong anywhere else but there are not enough for a category of respectable size.

These reasons for school selection are analyzed and reported below.

The graduates' reasons for choosing their current jobs in nursing were obtained using a structured question format. They were asked "For what reason(s) did you choose your current job in nursing? (Please circle as many as apply.)" Their reasons for any potential job change were obtained in a similar manner. The item was, "Please circle as many as apply to the following statement: I plan to stay in my current job until I find a job: . . . " followed by a set of 10 possible reasons and the space for "Other (please specify)." The data from the analysis of factors related to these two job-related motivation questions are shown and discussed below.

## Findings

*Choice of School.*—One factor which may be influential in a students' choice of a nursing school is his/her eligibility to be admitted to the school. Most schools have established certain academic achievement levels which are applied as entrance screening devices. The data in table 4.10 show that the baccalaureate graduates had demonstrated the highest level of achievement in high school (86 percent in the upper quarter) and the AD graduates had shown the lowest level of achievement in high school (70 percent in the top quarter). It is likely that those students whose high school achievement was high, particularly those in the top 10 percent, actually had more options from which to choose in terms of the nursing school they would subsequently attend.

The data in table 4.11 show that while there are some differences in the communities of origin of the graduates of the three types of programs, the differences are not statistically significant nor are they substantive in nature. About 1/3 of the students came from small cities and another third came from suburban communities. About one-fifth had rural origins and approximately 15 percent were from large cities. Therefore, it would appear that type of community of residence is not necessarily a limiting factor in one's choice of type of nursing school.

The comparisons of reasons given for choice of nursing school type between graduates of AD, diploma, and baccalaureate nursing programs are shown in table 4.12. AD graduates most often chose their school type for reasons of expediency (67 percent)—basically that the program required less time and considerably

less money. Diploma graduates most often (43 percent) cited program quality as their primary motivation for selecting a diploma program; the shorter length of the program was a significant consideration for almost one-third of the diploma graduates. The primary reason for program type choice among baccalaureate graduates was that a baccalaureate degree offered better prospects for career advancement in nursing. Second reasons were also tabulated for those 326 respondents who gave more than one reason. These data are not shown here but the net result was to further emphasize the different motivational choice patterns among graduates of AD, diploma, and baccalaureate nursing programs which are shown in the data in table 4.12.

The data in table 4.13 show that once the "school type decision" has been made, very practical considerations became choice priorities for graduates from all three types of programs. Proximity to home was a primary concern for more than half the AD graduates and about one-third of each of the diploma and baccalaureate graduate groups. Proximity to home also contributes to lowering the cost of one's nursing education. Among the baccalaureate graduates specific school choice was notably influenced by expediency factors, primarily cost, and the fact that they had already obtained a significant number of pre-nursing academic credits at that institution.

Table 4.14 data show that among all the nurse graduates there were some differences between the most promising, promising, and nonselected groups in terms of the reasons they gave for having chosen the type of nursing school they had attended. However, while the $X^2$ is significant at the .05 level of probability, the differences do not lend themselves to the identification of any notable substantive differences among nominated and non-nominated nurse graduates. The data in table 4.15 show that the groups were very similar in the reasons they gave for having chosen their particular nursing school.

Tables 4.16, 4.17, and 4.18 show the data which were tabulated from the nurse graduates' responses to the question, "Why did you choose to enter nursing?" The respondents' answers were classified and coded into nine categories and an "other" category. The data show that, overall, the most commonly cited motivations for choosing the nursing profession were: a desire to provide a helping service to others (49 percent cited this as either their first or second reason); as a source of personal interest and satisfaction (42 percent overall — however, this "motivation" really sheds very little light on the question); and the economic stability and security enjoyed by members of the profession (21 percent). The data also show that the reported reasons for choosing nursing differed notably between the baccalaureate graduates and the graduates from AD and diploma programs. The baccalaureate graduates cited service less often (37 percent for baccalaureate, 49 percent for both AD and diploma); they exhibited more interest in the positive economic aspects of a nursing career (21 percent for baccalaureate, 12 percent for both AD and diploma); and more reported that they chose nursing as a substitute for a career in medicine (15 percent for baccalaureate, less than 10 percent for both AD and diploma). The higher level of interest in the economic aspects of career among the baccalaureate graduates is also seen in the fact that they cited "career advancement" most often as their first reason for choosing their type of nursing school (table 4.12).

*Choice of Job.*—The reasons given for their choice of their current nursing job varied somewhat between graduates of AD, diploma, and baccalaureate programs. Table 4.19 shows statistically significant differences in four areas. Diploma and baccalaureate graduates indicated more often than did AD graduates that they chose their jobs because they could work in their clinical area of choice and because they felt they could benefit from additional learning experiences provided by the job. More diploma graduates cited favorable working conditions (49 percent) than either AD or baccalaureate graduates (39 percent and 38 percent, respectively). More baccalaureate graduates (18 percent) reported that they chose their job as preparation for another job. This is entirely consistent with the apparently higher motivation for career advancement which is shown in the baccalaureate graduates' reported reasons for choosing nursing as a career and choosing a baccalaureate nursing program.

The data in table 4.20 show almost no geographic differences in reasons given by respondents for their job choice. Table 4.21 shows that when graduates' reasons for choos-

ing current jobs were compared according to their nomination status as most promising, promising, and nonselected, only one reason showed a statistically and substantively significant difference. The "most promising" and "promising" graduates gave the reason "It is a place where I can use my education and abilities" more often than the graduates who were in the nonselected categories. In general there was little motivational difference according to nomination status.

Table 4.23 shows the comparisons of the reasons given for job choice by nurse graduates who were employed in the five major worksites among hospital-employed nurses: general inpatient units (N = 442), intensive care and coronary care units (N = 160), operating rooms (N = 32), emergency rooms (N = 36), and nursery and labor and delivery (N = 27). Of the respondents employed in the specialty units about three-fourths said they selected the job because it was in their clinical area of choice; not quite half of the general unit nurses gave that reason. ICU-CCU and ER nurses most often reported that the job would provide additional learning experiences from which they could benefit. Factors of salary, fringe benefits, and possibilities for advancement did not vary among worksites. The OR nurses cited favorable working conditions more often than the other groups (probably the predictable, regular hours), but least often reported that they chose the job because it gave them an opportunity to use their education and abilities. The general unit nurses gave reasons of convenience, limitation of locality, and limited availability of jobs more often than the respondents employed in the other hospital worksites.

It is apparent from the data in table 4.24 that nurse graduates in different salary ranges differed significantly in most of the reasons they gave for choosing their current job. The respondents in the lower salary category (under $8,000 annually) indicated least often that they chose their job because it was their clinical area of choice, for the additional learning experiences it afforded, for the possible advancement opportunities, or that it had good fringe benefits. This same group most often gave the reasons that it was the only job available, that they were limited to finding a job in that locality, that it was convenient in terms of location, and simply that they needed the money.

The data in table 4.25 show that staff nurses cited the opportunity for additional learning experiences as a reason for job choice more often than respondents who were head nurses, assistant head nurses, and supervisors (66 percent and 47 percent, respectively). Interestingly, fewer supervisory nurses cited good pay as a reason for choosing their jobs; but, as one would expect, more of them cited the potential for advancement as a motivator than did the staff nurses. Factors of clinical area of choice, fringe benefits, and transportation convenience showed little difference between staff and supervisory nurses, but supervisory nurses did report more often that their choice of job was influenced by favorable working conditions and the fact that it gave them an opportunity to use their education and abilities to advantage.

*Possible Reasons for Changing Jobs.* — Tables 4.26 through 4.32 show data related to the factors which could influence the respondents to change their current job. It should be recalled that their responses were solicited by using the item: "I plan to stay in my current job until I find a job: . . . " followed by a list of 10 possible reasons (plus "other"). Respondents could check as many reasons as were applicable to their situation. The total column in each table shows that, in the total group, the response given most often was "I do not anticipate changing jobs" (29 percent). Better working hours was the next most common response (25 percent), and a chance for advancement would be a change motivator for 21 percent of the group. Getting a job in one's clinical area of preference, obtaining a position with more professional independence, and finding a higher salaried job were each given as possible change factors by about one-fifth of the group.

Table 4.26 shows that factors which would motivate these graduates to change jobs varied significantly by school type in four areas. More baccalaureate students would change jobs for one with more individual status and one with chances for advancement. More baccalaureate graduates (32 percent) would also change jobs for one with more professional independence as compared with only 11 percent of the AD graduates and 17 percent of the diploma graduates. More AD and diploma respondents (31 percent and 32 percent, respectively) do not anticipate changing jobs, while only 21 percent of the baccalaureate respondents expect to

remain in their current position. This is a gain consistent with the apparently higher motivation for career advancement expressed by baccalaureate graduates throughout this survey.

The data in tables 4.27 and 4.28 show no notable motivational differences among the respondents either by geographic region or by nomination status. Table 4.29 indicates that proportionally more respondents working in pediatrics would change for better hours, and more nurse graduates in Medicine/Surgery would change jobs for a better location. However, the sizes of the groups are so disparate that these observations should be considered suggestive at best. This same caveat applies to any interpretation of the data in table 4.30.

Only 6 percent of those in OR and 17 percent of those in ER would change jobs for better working hours as compared to 26 percent to 34 percent for the others. Only 6 percent of those in OR would want better working conditions—about 18 percent for the others. Twenty-five percent of those in general inpatient units would change for a more preferred clinical area as compared to 13 percent and less for the other areas.

No one in Nursery/Labor/Delivery and only 6 percent of those in OR would change jobs for a better location as compared to 11 percent to 16 percent for the other three areas, but this doesn't seem too important.

Those in more specialized units do not anticipate changing jobs (33 to 44 percent) as do those in general inpatient units (28 percent).

Table 4.31 shows the comparison of reasons for possible job change given by staff nurses and nurses who held supervisory types of positions. Generally, staff nurses would want a job with more individual status (13 percent compared to 8 percent for those in a supervisory position) and a job with better working hours (28 percent to 18 percent). As would be expected, the staff nurses would also like a job with more professional independence (22 percent) whereas only 13 percent of the supervisory nurses found this an important factor for changing jobs. Also as expected, more of those in a supervisory capacity (45 percent) anticipated no further change in position; while only 31 percent of the staff nurses anticipated remaining where they were.

Table 4.32 shows several statistically significant trends. As one moved up the salary scale in nursing, personal development became an important consideration for changing jobs while job-specific influences seemed more important for the nurse graduates on the lower end of the salary scale.

For instance, as salary increased, jobs would have more appeal if there were more individual status involved, if there were more chance for advancement, and if there were more professional independence available. On the lower end of the pay scale, however, the respondents indicated they would more readily change jobs for a higher salary, for better working hours, for better working conditions, and for a more preferred clinical area.

## Summary

The purpose of this section was to identify influential factors in the nurse graduates' choices of nursing school, their choices of nursing jobs following graduation, and factors which could influence them to change jobs. The findings showed:

- Graduates from baccalaureate nursing schools had shown the highest level of academic achievement in high school; graduates from associate degree programs showed the lowest high school achievement levels.
- The community of origin did not differ by school type among the respondents.
- AD graduates most often chose their type of nursing school for reasons of expedience — basically the requirements of less time and less money. The primary reason cited by baccalaureate graduates for having chosen their type of school was that a baccalaureate degree offered better prospects for advancement in the nursing profession.
- The nurse graduates' choices of particular nursing schools (after the school type decision had been made) were the very practical factors of proximity to home, cost, and amount of previous credits earned.
- The reported school selection motives did not differ among selected and nonselected nurse graduates.
- The primary reasons the nurse graduates gave for having selected nursing as a career were: to provide service to others; for personal interest and satisfaction; and the economic stability offered by the profession.

- Baccalaureate graduates cited the service motivation less often than did diploma and AD graduates; they had more interest in the economic aspect and more of them reported they had chosen nursing as a substitute for a career in medicine.
- Some differences by school type were observed in the nurse graduates' reported motivations for choosing their current jobs. AD graduates cited less often than diploma or baccalaureate graduates the reasons that the job was in their clinical area of choice and that the job afforded them additional learning experiences. Diploma graduates cited favorable working conditions more often than the other two groups. Baccalaureate graduates more often reported that they selected the job as preparation for another job. No differences in job choice factors were noted by either geographic region or nomination status.
- About three-fourths of the nurse graduates who were employed in specialty units stated they had selected their job because it was in their clinical area of choice; not quite half the general unit nurses gave that reason. General unit nurses cited convenience, limitation of geographic area, and the limited availability of jobs more often than the special unit nurses.
- There were notable differences in motivating factors in job choice according to annual income. Nurse graduates in the lowest salary category (under $8,000) most often gave reasons that it was the only available job, that they were limited to finding a job in that locality, that the location was convenient, and that they needed the money.
- When asked to identify factors which could induce them to change their job, graduates from baccalaureate schools showed a notably different response pattern from the other two groups. Factors of mobility, individual status, and chance for advancement and professional independence held greater appeal for the baccalaureate graduates.
- In general there were no substantive differences in job-change motivations by geographic region, nomination status, clinical area, or worksite.
- Motivations for possible job change were different for the graduates earning higher salaries from those earning less money. Among the higher paid nurse graduates, personal and professional development were more important factors (e.g., advancement, independence, and status). The lower paid nurses would more readily change jobs for higher salary and better working conditions and hours.

# III. MOTIVATIONAL AND BACKGROUND FACTORS ASSOCIATED WITH NURSING PERFORMANCE AND ASPIRATIONS

## Background

In the previous section, the focus of analysis was the reported motivation of the nurse graduates for making two significant career decisions—choice of their nursing school and choice of their nursing job. Another significant element in the preparation of nurses of the highest quality is the process of choosing from among the applicants to nursing schools those individuals who will succeed in nursing school and then go on to be effective practicing nurses. Administrators and admissions committees and officers take this responsibility to the applicants and the profession very seriously; they are continually working at improving their selection procedures. Their persistent problem is the identification of the "best set" of prenursing characteristics which will help them in identifying and selecting those applicants who will become the best nurses.

While this particular problem was not one of the specific goals of the original contract study, it was determined that a closer look at some prenursing characteristics as they relate to nursing performance might yield some information of value to the Division and schools of nursing. The purpose of this section is to report the results of the analysis of the relationships between five elements of the nurse graduates' job-related behavior and five selected prenursing characteristics. The five elements of job-related behaviors are: (1) the graduates' performance on the State Board Test Pool Examinations; (2) the graduates' worksites; (3) the graduates' positions 1 year after graduation; (4) the graudates' ratings on the six subscales of the Six-D Scale of Nursing Performance given by supervisors; and (5) the graduates' plans for their own future in nursing practice. The five prenursing characteristics which were selected as "predictor" variables were: (1) graduates' first-stated reason for choosing nursing as a career; (2) graduates' perceptions of the nursing profession before they entered nursing school; (3) graduates' rank in the high school graduating class; (4) graduates' fathers' occupations; and (5) graduates' mothers' occupations.

## Findings

*SBTPE Scores.*—Tables 4.33 through 4.38 show the relationship between State Board scores obtained by the 771 nurse graduates who provided those data and the selected prenursing variables. In terms of their reasons for choosing nursing in the first place, the graduates who said their first reason was the influence of some significant other person (usually parents and other relatives) obtained consistently lower SBTPE scores; the differences were statistically significant on the tests in pediatric and psychiatric nursing. Table 4.34 shows that those who described their prenursing image of the profession as "idealistic" and "romantic" obtained generally higher SBTPE scores than respondents with other perceptions. It should be noted that those "idealists" reported that their images did undergo changes after they got into school and into practice which put them more in congruence with reality. Nonetheless, this "de-idealizing" did not apparently interfere with their nursing learning as measured by the SBTPE.

Table 4.35 should surprise no one; it shows that rank in high school graduating class was positively, significantly ($p < .01$) associated with SBTPE performance on all five test areas.

The two remaining prenursing variables which were examined as possible "predictors" of elements of nurse job behaviors were the occupations of the nurse graduates' parents. For this analysis, occupations were categorized as health-related and non-health-related. It should be noted that the original data analysis showed that there were relatively few nurse graduates whose parents had been engaged in health-related occupations (5 percent of the fathers and 9 percent of the mothers). The data in tables 4.36 and 4.37 show that there were no significant differences on SBTPE scores between the graduates whose parents were in health-related occupations and those whose parents were in non-health-related occupations.

*Worksite.*—The specific worksites of the nurse graduates were grouped into four categories for this analysis: outpatient and nonhospital; inpatient general units; nursery and labor/delivery; and the very acute areas such as intensive care and coronary care units and emergency, operating and recovery rooms. Tables 4.38 through 4.42 show that there are hardly any differences by worksite in terms of the selected prenursing background characteristics of the nurse graduates. The one exception to this is that a higher proportion of nurses who were employed in inpatient general units had graduated within the upper quarter of their high school class than those who were employed in the other three worksite categories. However, this finding would seem to have little substantive significance in spite of its statistical significance. These "non-findings" are essentially consistent with those previously reported below; i.e., that worksite assignment/selection bears little relationship to a variety of background and experience characteristics of the recent nurse graduates.

*Position.*—Within 1 year after graduation from nursing school, 81 percent of the respondents held positions as staff nurses, and 6 percent were in supervisory positions such as head nurse, assistant head nurse, or supervisor. Tables 4.45, 4.46, and 4.47 show that there were no differences between the staff nurses and supervisory nurses in terms of their high school rank or their parents' occupational status as health-related or non-health-related. However, the two tables which reflect the personal motivations and perceptions which the graduates had before they entered nursing school show some differences worth comment. Fewer supervisory nurses reported that their first reason for going into nursing was service and proportionally more of them cited prior experience and personal interest/motivation than did the staff nurses. A lower proportion of supervisory nurses reported that their image of nursing had been primarily that of an occupation dedicated to "helping people" and more of them thought their prenursing perception of the profession was a realistic one. Caution should be observed in interpreting these findings since the numbers of staff and supervisory nurses are so unbalanced in this study. However, the data do suggest some possible fruitful directions for other studies focused more directly on staff and supervisory nurses and their characteristics.

*Performance on Six-D Subscales.*—The measure of on-the-job performance used for this analysis was the set of six subscale scores which was obtained from the supervisors' ratings of the nurse graduates. The data are shown in tables 4.48 through 4.52. Nurses who had indicated that their primary reason for choosing nursing as a profession was to increase their knowledge were given somewhat higher ratings than graduates who stated other reasons, but the differences are not statistically significant. Prenursing perceptions of the profession were totally unrelated to the performance subscale scores, as were mothers' and fathers' occupation. The nurse graduates who had graduated in the top 10 percent of their high school class obtained higher performance scores than the others, but again the differences were not statistically significant.

*Future Plans.*—One significant element of nurse behavior—particularly for those who have only been in practice for a short time — is that of plans for one's professional future. The relationships between the respondents' stated future plans and the five selected "predictor" variables are shown in tables 4.53 through 4.57. None of the $X^2$ values which were computed for these distributions were statistically significant. However, some of the motivations for entering nursing of the respondents are noteworthy—particularly from those nurse graduates whose plans included leaving nursing practice—either temporarily or permanently. Once again, the number is small, so overinterpretation should be avoided. The nurses who planned to leave practice were more likely to have chosen the profession on the basis of its promise of economic stability and the influence of others, and less on the basis of giving service.

## Summary

The purpose of this section was to determine the relationships between five elements of graduates' job-related behaviors (SBTPE performance, worksite, position, graduates' performance ratings on the Six-D Scale given by supervisors, and future plans for nursing practice) and five selected prenursing characteristics (reason for choosing nursing as a career, prenursing perceptions of the profession, rank in high school graduating class, and father's and mother's occupation). Findings were:

- Differences in performance on State Board Test Pool Examinations were associated with three of the five selected prenursing characteristics. Higher SBTPE scores were obtained by graduates who had been in the upper ranks of their high school graduating class and by those who had indicated that their prenursing image of the profession was "idealistic" or "romantic." Lower SBTPE scores were obtained by graduates whose primary reason for entering nursing was the influence of some other individual — usually a parent or other relative.
- There was very little association between the graduates' particular worksite and the five selected background characteristics. The only difference we observed was that a higher proportion of nurses who were employed in inpatient general units had graduated in the upper quarter of their high school class than graduates employed in the other worksite categories. This difference is not judged to have substantive significance, however.
- Within 1 year after graduation, 81 percent of the respondents were staff nurses and 6 percent were in supervisory positions. While the differences were not statistically significant, it was observed that proportionally fewer supervisory nurses reported that their first reason for going into nursing was "service to others" and proportionally more cited prior experience and personal interest/motivation. Supervisory nurses were also less likely to have had the image of nursing as an occupation dedicated to "helping people" and more likely to have held what they considered to be a "realistic" image of the profession even before they entered nursing school.
- None of the selected prenursing school characteristics were statistically significantly related to the nursing performance scale scores given to the graduates by their supervisors. However, the scores of graduates who had been in the upper 10 percent of their high school graduating class tended to be given higher performance scores, as did those who indicated that their primary reason for choosing the nursing profession was to increase their own knowledge.
- No statistically significant differences were observed in the selected prenursing school variables between the graduates who intended to stay in nursing and those who intended to leave temporarily or permanently. It should be recalled however, that very few of the respondents expressed the intention to leave; so we do not consider this finding particularly useful or telling.

# IV. PROFESSIONAL ACTIVITIES AND CONTRIBUTIONS

## Background

It is generally agreed that the groups of individuals who are occupationally classified as professionals bear responsibilities for the development of their professions beyond the boundaries of their specific employment setting. For example, while professors may be paid primarily for teaching, it is expected that they will contribute to the body of knowledge in their area through an active program of research and publication. The voluntary participation of physicians on panels and commitees which are related to community health problems and issues is expected. Many of these activities are not tasks which, if one did not perform them, would merit firing a person from a job. However, they are significant components of being a "real professional."

We were interested in determining the participation of this sample of relatively new nurse graduates in a limited number of professional activities which are not normally a part of one's nursing job assignment. Further, we wished to determine if the patterns of professional participation and contribution varied between the groups of graduates who had been identified as "promising" by their nursing school faculty/administrators and the group who had not been selected.

## Findings

One professional activity which can enhance the practice of a profession is regular reading of the publications which describe the research trends, issues, and new ideas in the area. The nursing related publications were listed in the questionnaire and respondents were asked to describe their readership patterns for those journals. The overall distribution of reading patterns of all journals specified is shown in table 49 of Part III of this publication.

From that list, the most frequently read publications were selected for this secondary analysis: *American Journal of Nursing (AJN)*, *Nursing '76*, *RN*, and the special area journals related to the clinical interests of the graduates. The data in tables 4.58, 4.59, and 4.60 show that, journal by journal, the reading patterns among the three groups did not differ substantially either in cover-to-cover reading, scanning the journals, or reading articles of special interest. However, general index of overall reading consumption—the "per capita readership"—indicated that in all three readership styles, the group nominated as most promising did more professional reading.

A second opportunity for professional development is provided by professional organizations. Respondents were asked to list the professional organizations in which they were members and to describe their level of participation. These data are shown in tables 4.62 and 4.63. While overall professional membership was not very high (the ANA is highest with 21 percent) the data in table 4.62 show that the "most promising" group had the highest "per capital membership" rate and the nonselected group had the lowest rate. Likewise, meeting attendance shows the same pattern. Very few of any group had yet held office in their professional organizations.

The last area of professional participation about which the respondents were queried was that of professional presentations and publications. The data in table 61 show that the overall rate of contribution among these first-year nurse graduates was low (altogether less than 15 percent) and there was very little difference in these behaviors between the selected and nonselected graduates.

## Summary

The purposes of this section have been to describe the extra-job professional participation of the recent nurse graduates and to compare the levels of participation of those graduates who were nominated as "most promising," those who were nominated as "promising," and those who were not selected for either group by their nursing school administrators/faculty.

- The most frequently read nursing publications were (in order) the *American Journal of Nursing*, *Nursing '76*, *RN*, and the special area journals related to the graduates' clinical area of practice.

- A general index of overall reading consumption—the "per capita readership"—showed that the group nominated as most promising did more professional reading.
- In general, membership in professional organizations was relatively low. The ANA was highest with 21 percent of the respondents reporting that they were members.
- The graduates nominated as "most promising" had the highest "per capita membership" rate in professional organizations; the non-selected group had the lowest rate. Attendance at meetings showed the same pattern.
- The overall rate of professional presentations and publications for the first-year nurse graduates was quite low (less than 15 percent) and there were no differences between the selected and non-selected graduates on this professional behavior.

# V. NURSE GRADUATES' PERCEPTIONS OF THE QUALITY OF THEIR BASIC NURSING EDUCATION RELATIVE TO THEIR PRESENT PERFORMANCE

## Background

The heart of the nurse graduate appraisal forms was the set of 66 nurse behaviors which were developed for the study to use as a basis for a valid, reliable nurse performance measure. Each responding graduate was asked three questions about each behavior: (1) how often they performed the behavior in their current job; (2) how well they thought they performed the behavior; and (3) how well their nursing school had perpared them for that behavior.

When all self-appraisal and employer appraisal data had been collected, a principal components analysis of the graduates' and employers' responses to the 66 nurse behavior items was performed. This resulted in a 42-item performance appraisal instrument consisting of five subscales: Leadership; Critical Care; Planning/Evaluation; Teaching/Collaboration; and Interpersonal Relations/Communications. A sixth 10-item subscale, Professional Development, is a part of the total performance instrument (the Six-Dimension Scale of Nursing Performance), but is not of interest in the question which is addressed in this section.

The purpose of the analysis reported in this section is to determine the nature of the relationship between the nurse graduates' perceptions of the quality of their basic preparation for nursing, i.e., their nursing school education, and their level of performance on the job approximately 1 year after graduation.

## Findings

The data in table 4.64 show that graduates of diploma schools of nursing consistently rated the quality of their preparation higher than graduates of either AD or baccalaureate programs. By contrast, the data in table 4.65 show that there were no significant differences in the perceived quality of nursing school preparation between most promising, promising or non-selected nurse graduates.

In order to determine the nature of the relationship between actual nurse performance and the nurse graduates' perceptions of the quality of their basic nursing education, correlation coefficients (Pearson r) were computed between the graduates' ratings of their preparation and the performance rating which was given to those graduates by their immediate supervisor. The subroutine, PEARSON CORR of the Statistical Package for the Social Sciences (SPSS) was applied to the data. The default option for the PEARSON CORR program is pairwise deletion of cases in which either of the values to be correlated is nursing. Therefore the r's in table 4.66 and 4.67 are based strictly on the number of cases with scale scores for both school appraisal by the graduate and a performance appraisal score from the graduates' supervisor.

The data in the last columns of tables 4.66 and 4.67 show that, while they are statistically significant (because of the relatively large N's involved) the r's between all the graduates' perceptions of quality of nursing education and the supervisors' ratings of their nursing performance are all quite low. They range from a low of .079 on the Leadership subscale to a high of .169 on the Critical Care subscale. This indicates that, overall, the graduates' opinions of how well they were prepared bore little relationship to the quality of their nursing performance 1 year after graduation.

Table 4.66 shows that in general the correlations between graduates' perceptions of their preparation and supervisors' evaluations of graduate performance was highest among the graduates of AD programs. This is consistent with the findings reported in Part III of the project that the AD graduates rated their preparation the lowest, rated their own performance the lowest, and were rated the lowest on performance by their supervisors. The r's between graduates' perceived quality of preparation and employer evaluation of actual performance were the lowest for the baccalaureate

graduates in all five performance areas. It is notable that on the Critical Care subscale the correlation was actually negative. This would seem to suggest that the baccalaureate graduates may be getting a better nursing education in that area than they think they are.

While the diploma graduates had consistently rated their basic nursing preparation highest, the correlations between those ratings and the supervisors ratings of their subsequent nursing performance were quite low.

In order to determine if graduates' perceptions of preparation were differentially associated with evaluation of later nursing performance according to nomination status, the data shown in table 4.67 were calculated. Those r's are also quite low, but it may be seen that, with the exception of the Critical Care area, the correlations are the highest for the graduates who were not selected by their administrators/faculty as either "promising" or "most promising." It should be noted here that the graduates who were nominated as most promising and promising were subsequently shown to have received higher performance ratings from employers on all subscales than the nonselected group.

In summary, these data suggest that the diploma graduates tended to overestimate the quality of their preparation, the baccalaureate graduates tended to underestimate theirs, and that in the aggregate the graduates' opinions of how well they were prepared bore little relationship to the quality of their nursing performance after 1 year of nursing practice.

## Summary

The purpose of this section was to report the findings related to the relationship between the responding nurse graduates' perceptions of the quality of their basic preparation for nursing and their level of job performance 1 year after graduation.

- Graduates from diploma schools rated their nursing school preparation highest in all five performance areas; AD graduates rated theirs lowest in all areas except Critical Care.
- Graduates who were nominated as "most promising," "promising," and nonselected did not rate the quality of nursing preparation differently.
- Correlations between graduates' perceptions of the quality of their nursing education and their supervisors' ratings of the graduates' actual nursing performance were generally quite low.
- Diploma graduates overestimated the quality of their preparation; baccalaureate graduates underestimated theirs.
- In the aggregate the graduates' opinions of how well they were prepared for nursing bore little relationship to the quality of their nursing performance after 1 year of practice.

# VI. SUMMARY

The purpose of this report has been to address five question areas of particular interest to the Division of Nursing. The report was based on secondary analysis of selected data from the study. We wished to determine:

- the relationship between the type of educational program and the utilization of the graduate on the job, and the extent of congruence in job performance appraisal by employer and newly employed graduates;
- variables which influence choice of a particular educational program and a particular job;
- motivational and other characteristics of graduates acording to their prenursing perceptions and background, their present position and performance, and their future professional educational and employment aspirations;
- the extra-job professional activities among recent graduates, and the relationship of such activities with prediction categories; and
- differential perceptions of quality of basic education relative to present performance.

## Findings

*1. Nursing Preparation, Job Utilization, and Congruence of Self-Appraisals and Employer Appraisals of Performance*

- Graduates from diploma programs reported the highest rate of employment in hospital settings, and proportionately more of them were in medical-surgical practice than were either AD or baccalaureate graduates.
- Over 80 percent of the responding nurse graduates held staff nurse positions 1 year after graduation. There were no differences by school type in the types of positions held nor in unit assignments. Baccalaureate graduates earned higher salaries and had fewer evening and night staff assignments.
- Comparisons of the graduates' self-appraisal scores in six performance areas and the appraisal scores given them by their supervisors showed that in general the graduates rated themselves higher in the areas of Leadership, Interpersonal Relations/Communication, and Professional Development than their supervisors did. This was particularly true of the diploma graduates. By contrast, the graduates rated their performance in the Critical Care area lower than their supervisors rated them.
- The nurse graduates who had been nominated as "most promising" tended to underrate their own performance, and those who were in the "promising" and nonselected groups tended to overrate their performance.

*2. The Nurse Graduates: Choice of School and Choice of Job*

- Compared to baccalaureate and diploma graduates, responding nurse graduates from associate degree programs showed the lowest level of academic achievement in high school, had selected their school type most often on factors of expediency, and least often cited as job-choice factors that the job was in their clinical area of choice or that the job afforded additional learning experiences.
- Baccalaureate graduates' responses showed a consistently high interest in economic and professional advancement factors. They, more than AD or diploma graduates, reported that a major consideration in their choice of type of nursing program had been that they felt a baccalaureate preparation would afford them better opportunities for advancement in nursing. They more often cited the economic stability of nursing as a factor in their choice of nursing in the first place. They more often indicated that they had chosen their current jobs as preparation for another. They anticipated more job mobility; and factors of individual status, chance for advancement and professional independence had more appeal to them as possible reasons for changing jobs.
- The comparison of job-choice factors reported by nurse graduates employed in specialty units and those who worked on general units showed that more of those who worked in specialty units had selected their

job because it was in their clinical area of choice (three-fourths compared to less than one-half) and that general unit nurses more often cited factors of employment convenience.

- Nurses in the lower salary categories differed from higher salaried nurses in both job choice factors and factors which could influence them to change jobs. They more often gave job choice factors of limited job availability, convenience of location and financial need. The considerations of higher salary, and better working conditions and hours also had more job-change appeal for the lower salaried group, while the higher salaried nurses said they would be more influenced to change jobs by such factors as advancement, professional independence, and higher job status.
- There were no differences in factors associated with school choice, job choice, or job changing either by nomination status or the geographic regions in which the respondents lived.

*3. Motivational and Background Factors Associated with Nursing Performance and Aspirations*

- Differences in performance on State Board Test Pool Examinations were associated with three of the five selected prenursing characteristics. Higher SBTPE scores were obtained by graduates who had been in the upper ranks of their high school graduating class and by those who had indicated that their prenursing image of the profession was "idealistic" or "romantic." Lower SBTPE scores were obtained by graduates whose primary reason for entering nursing was the influence of some other individual — usually a parent or other relative.
- There was very little association between the graduates' particular worksite and the five selected background characteristics. The only difference we observed was that a higher proportion of nurses who were employed in inpatient general units had graduated in the upper quarter of their high school class than graduates employed in the other worksite categories. This difference is not judged to have substantive significance, however.
- Within 1 year after graduation 81 percent of the respondents were staff nurses and 6 percent were in supervisory positions. While the differences were not statistically significant, it was observed that proportionally fewer supervisory nurses reported that their first reason for going into nursing was "service to others" and proportionally more cited prior experience and personal interest/motivation. Supervisory nurses were also less likely to have had the image of nursing as an occupation dedicated to "helping people" and more likely to have held what they considered to be a "realistic" image of the profession even before they entered nursing school.
- None of the selected prenursing school characteristics were statistically significantly related to the nursing performance scale scores given to the graduates by their supervisors. However, the scores of graduates who had been in the upper 10 percent of their high school graduating class tended to be given higher performance scores, as did those who indicated that their primary reason for choosing the nursing profession was to increase their own knowledge.
- No statistically significant differences were observed in the selected prenursing school variables between the graduates who intended to stay in nursing and those who intended to leave temporarily or permanently. It should be recalled however, that very few of the respondents expressed the intention to leave, so we do not consider this finding particularly useful or telling.

*4. Professional Activities and Contributions*

- The most frequently read nursing publications were (in order) the *American Journal of Nursing*, *Nursing '76*, *RN*, and the special area journals related to the graduates' clinical area of practice.
- A general index of overall reading consumption — the "per capita readership" — showed that the group nominated as most promising did more professional reading.
- In general, membership in professional organizations was relatively low. The ANA was highest with 21 percent of the respondents reporting that they were members.
- The graduates nominated as "most promising" had the highest "per capita membership" rate in professional organizations; the nonselected group had the lowest rate.

Attendance at meetings showed the same pattern.

- The overall rate of professional presentations and publications for the first-year nurse graduates was quite low (less than 15 percent) and there were no differences between the selected and nonselected graduates on this professional behavior.

*5. Nurse Graduates' Perceptions of the Quality of Their Basic Nursing Education Relative to Their Present Performance*

- Graduates from diploma schools rated their nursing school preparation highest in all five performance areas; AD graduates rated theirs lowest in all areas except Critical Care.
- Graduates who were nominated as "most promising," "promising," and nonselected did not rate the quality of their nursing preparation differently.
- Correlations between graduates' perceptions of the quality of their nursing education and their supervisors' ratings of the graduates' actual nursing performance were generally quite low.
- Diploma graduates overestimated the quality of their preparation; baccalaureate graduates underestimated theirs.
- In the aggregate the graduates' opinions of how well they were prepared for nursing bore little relationship to the quality of their nursing performance after 1 year of practice.

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**Table 4.1. — Distribution of nurse graduates by type of nursing school and employing agency**

| Employing agency | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Hospital | 242 | 73 | 283 | 85 | 169 | 71 | 694 | 76 |
| Long-term care facility | 12 | 4 | 4 | 1 | 0 | - | 16 | 2 |
| Government | 4 | 1 | 5 | 1 | 27 | 10 | 43 | 4 |
| Private clinics/practitioner, industry, etc. | 16 | 5 | 10 | 2 | 4 | 2 | 20 | 2 |
| Public health | 1 | <1 | 7 | 2 | 12 | 5 | 20 | 2 |
| Schools of nursing | 1 | <1 | 1 | <1 | 5 | 2 | 7 | <1 |

**Table 4.2. — Distribution of nurse graduates by type of nursing school and clinical practice area**

| Clinical area | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Medical | 61 | 18 | 56 | 17 | 48 | 20 | 165 | 18 |
| Surgical | 45 | 13 | 61 | 18 | 33 | 14 | 139 | 15 |
| Med.-Surg. | 92 | 27 | 95 | 29 | 44 | 18 | 231 | 25 |
| O.B. | 16 | 5 | 19 | 6 | 12 | 5 | 47 | 5 |
| Psychiatric | 5 | 2 | 18 | 5 | 9 | 4 | 32 | 4 |
| Geriatrics | 14 | 4 | 3 | 1 | 2 | 1 | 19 | 2 |
| Pediatrics | 19 | 6 | 26 | 8 | 39 | 16 | 84 | 9 |
| Specialty/Other | 10 | 4 | 6 | 2 | 5 | 2 | 21 | 2 |

**Table 4.3. — Distribution of nurse graduates by type of nursing school and hospital worksite**

| Hospital worksite | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Inpatient general unit | 157 | 46 | 167 | 50 | 118 | 49 | 442 | 48 |
| Intensive care unit | 26 | 8 | 32 | 10 | 33 | 14 | 91 | 10 |
| Coronary care unit | 12 | 4 | 11 | 3 | 6 | 3 | 30 | 3 |
| ICU-CCU | 13 | 4 | 17 | 5 | 9 | 4 | 39 | 4 |
| Operating room | 10 | 3 | 17 | 5 | 5 | 2 | 32 | 4 |
| Recovery room | 0 | - | 2 | <1 | 2 | <1 | 4 | <1 |
| Nursery | 3 | 1 | 6 | 2 | 3 | 1 | 12 | 1 |
| Labor and delivery | 6 | 2 | 5 | 2 | 4 | 2 | 15 | 2 |

**Table 4.4. — Distribution of nurse graduates by type of nursing school and type of position held**

| Type of position | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Staff nurse | 240 | 70 | 300 | 90 | 198 | 83 | 738 | 81 |
| Private duty nurse | 2 | <1 | 1 | <1 | 0 | - | 3 | <1 |
| Assistant head nurse | 10 | 3 | 3 | 1 | 0 | - | 13 | 1 |
| Head nurse | 21 | 6 | 6 | 2 | 7 | 3 | 34 | 4 |
| Supervisor | 8 | 2 | 4 | 1 | 1 | <1 | 3 | 1 |
| Instructor | 1 | <1 | 1 | <1 | 7 | 3 | 9 | 1 |

**Table 4.5. — Distribution of nurse graduates by type of nursing school and working hours[1]**

| Working hours | AD | | Diploma | | Baccalaureate | |
|---|---|---|---|---|---|---|
| | No. | Pct. | No. | Pct. | No. | Pct. |
| Days | 106 | 31 | 82 | 25 | 67 | 28 |
| Evenings | 93 | 27 | 86 | 26 | 41 | 17 |
| Nights | 62 | 18 | 68 | 21 | 26 | 11 |
| Rotating shifts | 71 | 21 | 115 | 35 | 111 | 46 |
| Hours flexible and self-determined | 16 | 5 | 11 | 3 | 9 | 4 |
| Some weekends | 210 | 61 | 225 | 68 | 152 | 63 |

[1] Respondents were directed to check as many categories as were applicable in their jobs.

**Table 4.6. — Distribution of nurse graduates by type of nursing school and salary 1 year after graduation**

| Salary | School type | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| <$6,000 | 22 | 6 | 16 | 5 | 12 | 5 | 50 | 5 |
| 6,000 - 7,999 | 54 | 16 | 33 | 10 | 10 | 4 | 97 | 11 |
| 8,000 - 9,999 | 108 | 32 | 122 | 37 | 73 | 30 | 303 | 33 |
| 10,000 - 11,999 | 81 | 26 | 114 | 34 | 91 | 37 | 294 | 32 |
| 12,000 - 14,999 | 16 | 5 | 27 | 8 | 26 | 11 | 69 | 8 |
| 15,000 - 16,999 | 0 | - | 1 | <1 | 2 | <1 | 3 | <1 |
| 17,000 and above | 0 | - | 0 | - | 6 | 3 | 6 | <1 |

**Table 4.7. — Comparisons of self-appraisals and employer appraisals of nurse graduate performance on six subscale scores: AD, diploma, and baccalaureate graduates**

| Subscales | AD | | Diploma | | Baccalaureate | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ |
| Leadership | 2.99 | 2.87 | 3.14 | 2.84 | 3.04 | 2.89 | 3.06 | 2.86 |
| Critical Care | 2.85 | 3.01 | 3.03 | 3.09 | 2.90 | 3.09 | 2.93 | 3.06 |
| Teaching/Collaboration | 2.55 | 2.64 | 2.69 | 2.68 | 2.77 | 2.88 | 2.66 | 2.72 |
| Planning/Evaluation | 2.80 | 2.84 | 2.91 | 2.93 | 2.98 | 3.03 | 2.89 | 2.92 |
| IPR/Communications | 3.12 | 3.07 | 3.28 | 3.06 | 3.25 | 3.15 | 3.22 | 3.09 |
| Professional Development | 2.76 | 2.73 | 2.79 | 2.74 | 2.75 | 2.76 | 2.77 | 2.74 |

**Table 4.8. — Comparisons of self-appraisals and employer appraisals of nurse graduate performance on six subscale scores: most promising, promising, and nonselected graduates**

| Subscales | Most promising | | Promising | | Nonselected | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ | Self $\bar{X}$ | Employer $\bar{X}$ |
| Leadership | 3.04 | 2.93 | 3.09 | 2.89 | 3.05 | 2.77 | 3.06 | 2.86 |
| Critical Care | 2.93 | 3.16 | 2.97 | 3.05 | 2.90 | 2.95 | 2.93 | 3.06 |
| Teaching/Collaboration | 2.70 | 2.82 | 2.62 | 2.69 | 2.65 | 2.63 | 2.66 | 2.72 |
| Planning/Evaluation | 2.90 | 3.04 | 2.91 | 2.89 | 2.86 | 2.83 | 2.89 | 2.92 |
| IPR/Communications | 3.22 | 3.15 | 3.23 | 3.09 | 3.19 | 3.01 | 3.22 | 3.09 |
| Professional Development | 2.81 | 2.79 | 2.77 | 2.76 | 2.72 | 2.68 | 2.77 | 2.74 |

**Table 4.9. — Multiple regression of self/supervisor appraisal discrepancy scores on school type, nomination status, and worksite for hospital-employed nurse graduates**

| Dependent variables | Beta | | | R | $R^2$ | Sig. |
|---|---|---|---|---|---|---|
| | School type | Nomination status | Worksite | | | |
| Leadership discrepancy | .044 | -.003 | -.124 | .130 | .017 | .01 |
| Critical Care discrepancy | .007 | .010 | -.040 | .041 | .002 | [1]ns |
| Teaching/Collaboration discrepancy | .004 | -.000 | -.069 | .069 | .005 | ns |
| Planning/Evaluation discrepancy | -.017 | .020 | -.065 | .070 | .005 | ns |
| IPR/Communication discrepancy | .032 | .012 | -.076 | .082 | .007 | ns |
| Professional Development discrepancy | .003 | .017 | -.005 | .018 | .000 | ns |

[1] Not significant.

**Table 4.10. — Distribution of nurse graduates by nursing school type and rank in high school graduating class**

| High school rank | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Upper 10 percent | 140 | 40 | 145 | 44 | 135 | 56 | 420 | 46 |
| Upper 25 percent | 103 | 30 | 112 | 34 | 72 | 30 | 287 | 31 |
| Upper 50 percent | 68 | 20 | 58 | 18 | 19 | 8 | 145 | 16 |
| Lower 50 percent | 10 | 3 | 11 | 3 | 11 | 5 | 32 | 4 |

**Table 4.11. — Distribution of nurse graduates by nursing school type and community of residence while in high school**

| Community of residence | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Rural or farm | 71 | 21 | 76 | 23 | 36 | 15 | 183 | 20 |
| Town or small city not near large city | 112 | 33 | 92 | 28 | 67 | 28 | 271 | 30 |
| Suburban area near large city | 106 | 31 | 113 | 34 | 93 | 39 | 312 | 34 |
| Large city | 46 | 14 | 44 | 14 | 39 | 16 | 129 | 14 |

**Table 4.12. — Distribution of nurse graduates by first reason given for choosing nursing school type[1]**

| Reasons | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Expediency | 231 | 67 | 108 | 32 | 21 | 9 | 360 | 39 |
| Geographic location | 60 | 18 | 17 | 5 | 6 | 3 | 83 | 9 |
| Recommendation | 5 | 2 | 25 | 8 | 10 | 4 | 40 | 4 |
| Program quality | 18 | 5 | 141 | 43 | 56 | 23 | 215 | 24 |
| Career advancement | 5 | 2 | 2 | <1 | 134 | 56 | 141 | 15 |
| Personal | 8 | 2 | 28 | 8 | 4 | 2 | 40 | 4 |
| Other | 2 | <1 | 2 | <1 | 5 | 2 | 9 | 1 |

[1] $X^2 = 658.08$, df = 14, $p < .001$.

**Table 4.13. — Distribution of nurse graduates by first reasons given for choosing their particular nursing school and school type**

| Reasons | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Expediency | 91 | 27 | 52 | 16 | 64 | 27 | 207 | 23 |
| Geographic location | 182 | 53 | 95 | 29 | 79 | 33 | 356 | 39 |
| Recommendation | 16 | 5 | 58 | 18 | 22 | 9 | 96 | 11 |
| Program quality | 31 | 9 | 107 | 32 | 52 | 22 | 190 | 21 |
| Career advancement | 0 | - | 0 | - | 6 | 3 | 6 | <1 |
| Personal | 13 | 4 | 15 | 5 | 8 | 3 | 36 | 4 |
| Other | 4 | 1 | 1 | <1 | 4 | 2 | 9 | 1 |

**Table 4.14. — Distribution of nurse graduates by first reason given for choosing nursing school type and nomination status[1]**

| Reason | Status | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Expediency | 138 | 42 | 125 | 41 | 97 | 35 | 360 | 39 |
| Geographic location | 36 | 11 | 26 | 9 | 21 | 8 | 83 | 9 |
| Recommendation | 16 | 5 | 13 | 4 | 11 | 4 | 40 | 4 |
| Program quality | 71 | 22 | 78 | 26 | 66 | 24 | 215 | 24 |
| Career advancement | 51 | 16 | 42 | 14 | 48 | 17 | 141 | 15 |
| Personal | 10 | 3 | 12 | 4 | 18 | 6 | 40 | 4 |
| Other | 1 | <1 | 3 | 1 | 5 | 2 | 9 | 1 |

[1] $X^2 = 24.07$, df = 14, $p < .05$.

**Table 4.15. — Distribution of nurse graduates by first reason given for choosing their particular nursing school and nomination status**

| Reason | Status | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Expediency | 81 | 25 | 66 | 22 | 60 | 22 | 207 | 23 |
| Geographic location | 132 | 40 | 118 | 39 | 106 | 38 | 356 | 39 |
| Recommendation | 30 | 9 | 29 | 10 | 37 | 13 | 96 | 11 |
| Program quality | 67 | 21 | 70 | 23 | 53 | 19 | 190 | 21 |
| Career advancement | 4 | 1 | 1 | <1 | 1 | <1 | 6 | <1 |
| Personal | 6 | 2 | 14 | 5 | 16 | 6 | 36 | 4 |
| Other | 1 | <1 | 4 | 1 | 4 | 1 | 9 | 1 |

**Table 4.16. — Distribution of nurse graduates by first reason given for entering nursing and nursing school type**

| Reason | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 168 | 49 | 162 | 49 | 89 | 37 | 419 | 46 |
| Economic stability | 40 | 12 | 40 | 12 | 51 | 21 | 131 | 14 |
| Influence of significant others | 20 | 6 | 22 | 7 | 11 | 5 | 53 | 6 |
| Expediency | 5 | 2 | 2 | <1 | 1 | <1 | 8 | 1 |
| Prior related experience | 20 | 6 | 18 | 5 | 9 | 4 | 47 | 5 |
| To increase knowledge | 8 | 2 | 6 | 2 | 6 | 3 | 20 | 2 |
| Substitute for medicine | 11 | 3 | 15 | 5 | 19 | 8 | 45 | 5 |
| Personal interest/satisfaction | 50 | 15 | 50 | 15 | 37 | 15 | 137 | 15 |
| Religious motivation | 2 | <1 | 6 | 2 | 3 | 1 | 11 | 1 |

**Table 4.17. — Distribution of nurse graduates by second reason given for entering nursing and nursing school type**

| Reason | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pt. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 5 | 2 | 8 | 2 | 10 | 4 | 23 | 3 |
| Economic stability | 35 | 10 | 19 | 6 | 10 | 4 | 64 | 7 |
| Influence of significant others | 7 | 2 | 12 | 4 | 7 | 3 | 26 | 3 |
| Expediency | 2 | <1 | 2 | <1 | 0 | - | 4 | <1 |
| Prior related experience | 6 | 2 | 8 | 2 | 5 | 2 | 19 | 2 |
| To increase knowledge | 5 | 2 | 6 | 2 | 9 | 4 | 20 | 2 |
| Substitute for medicine | 17 | 5 | 16 | 5 | 18 | 8 | 51 | 6 |
| Personal interest/satisfaction | 88 | 32 | 115 | 42 | 74 | 27 | 277 | 30 |
| Religious motivation | 4 | 1 | 2 | <1 | 3 | 1 | 9 | 1 |

**Table 4.18. — Distribution of nurse graduates by reasons (total of first and second) given for entering nursing and school type[1]**

| Reason | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 173 | 51 | 170 | 51 | 99 | 41 | 442 | 49 |
| Economic stability | 70 | 22 | 39 | 18 | 61 | 25 | 195 | 21 |
| Influence of significant others | 27 | 8 | 34 | 11 | 18 | 8 | 79 | 9 |
| Expediency | 7 | 2 | 4 | 2 | 1 | <1 | 12 | 1 |
| Prior related experience | 26 | 8 | 26 | 7 | 14 | 6 | 66 | 7 |
| To increase knowledge | 13 | 4 | 12 | 4 | 15 | 7 | 4 | 4 |
| Substitute for medicine | 28 | 8 | 31 | 10 | 37 | 16 | 96 | 11 |
| Personal interest/satisfaction | 38 | 47 | 165 | 57 | 111 | 42 | 414 | 45 |
| Religious motivation | 6 | 1 | 8 | 2 | 6 | 1 | 20 | 2 |

[1] Since these are cumulative percentages all column totals exceed 100 percent.

**Table 4.19. — Distribution of nurse graduates by reasons for job choice and school type[1]**

| Reasons | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| It is my clinical area of choice. | 141 | 41 | 188 | 57 | 126 | 53 | [2]455 | 50 |
| I felt I could benefit from additional learning experiences. | 178 | 52 | 203 | 61 | 145 | 61 | [3]526 | 58 |
| The salary is good. | 96 | 28 | 117 | 35 | 77 | 32 | 290 | 32 |
| There is a good chance for advancement. | 50 | 15 | 36 | 11 | 34 | 14 | 120 | 13 |
| The position offers good fringe benefits. | 69 | 20 | 83 | 25 | 57 | 24 | 209 | 23 |
| Working conditions were favorable. | 132 | 39 | 161 | 49 | 90 | 38 | [4]383 | 42 |
| It is a place where I can use my education and abilities. | 165 | 48 | 188 | 57 | 125 | 52 | 478 | 52 |
| It was the only job available here. | 35 | 10 | 32 | 10 | 17 | 7 | 84 | 9 |
| I was limited to this locality. | 47 | 14 | 48 | 15 | 42 | 18 | 137 | 15 |
| I needed the money. | 40 | 12 | 38 | 11 | 28 | 12 | 106 | 12 |
| As preparation for another job. | 34 | 10 | 44 | 13 | 42 | 18 | [3]120 | 13 |
| It is convenient in terms of transportation to and from work. | 87 | 25 | 85 | 26 | 46 | 19 | 218 | 24 |

[1] Reasons were not mutually exclusive choices.
[2] < .001.
[3] < .05.
[4] < .01.

**Table 4.20. — Distribution of nurse graduates by reasons for job choice and geographic region**

| Reasons | Geographic region | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | North Atlantic | | Midwest | | South | | West | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 102 | 44 | 167 | 54 | 117 | 52 | 69 | 47 | 455 | 50 |
| Additional learning | 139 | 60 | 186 | 60 | 125 | 55 | 76 | 52 | 526 | 58 |
| Salary | 83 | 36 | 98 | 32 | 59 | 26 | 50 | 34 | 290 | 32 |
| Advancement | 32 | 14 | 37 | 12 | 35 | 15 | 16 | 11 | 120 | 13 |
| Fringes | 57 | 25 | 69 | 22 | 49 | 22 | 34 | 23 | 209 | 23 |
| Favorable working conditions | 90 | 39 | 140 | 45 | 91 | 40 | 62 | 43 | 283 | 42 |
| Use education and abilities | 125 | 54 | 163 | 52 | 123 | 54 | 67 | 46 | 478 | 52 |
| Only job available | 30 | 13 | 26 | 8 | 19 | 8 | 9 | 6 | 84 | 9 |
| Limited to locality | 33 | 14 | 48 | 15 | 40 | 18 | 16 | 11 | 137 | 15 |
| Needed money | 33 | 14 | 39 | 13 | 27 | 13 | 7 | 5 | [1]106 | 12 |
| Preparation for other job | 42 | 18 | 38 | 12 | 18 | 8 | 22 | 15 | [2]120 | 13 |
| Convenient | 59 | 26 | 72 | 23 | 55 | 24 | 32 | 22 | 218 | 24 |

[1] $p < .05$.
[2] $p < .01$.

**Table 4.21. — Distribution of nurse graduates by reasons for job choice and nomination status**

| Reasons | Status | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 172 | 53 | 157 | 51 | 126 | 45 | 455 | 50 |
| Additional learning | 193 | 59 | 185 | 61 | 148 | 53 | 526 | 58 |
| Salary | 104 | 32 | 96 | 31 | 90 | 32 | 290 | 32 |
| Advancement | 44 | 14 | 41 | 13 | 35 | 13 | 120 | 13 |
| Fringes | 69 | 21 | 75 | 25 | 65 | 23 | 209 | 23 |
| Favorable working conditions | 154 | 47 | 112 | 37 | 117 | 42 | [1]383 | 42 |
| Use education and abilities | 198 | 61 | 153 | 50 | 127 | 45 | [2]478 | 52 |

**Table 4.21. — Distribution of nurse graduates by reasons for job choice and nomination status — Continued**

| Reasons | Status | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Only job available | 31 | 10 | 21 | 7 | 32 | 11 | 84 | 9 |
| Limited to locality | 54 | 17 | 40 | 13 | 43 | 15 | 137 | 15 |
| Needed money | 34 | 10 | 31 | 10 | 41 | 15 | 106 | 12 |
| Preparation for other job | 45 | 14 | 41 | 13 | 34 | 12 | 120 | 13 |
| Convenient | 72 | 22 | 79 | 26 | 67 | 24 | 218 | 24 |

[1] $p < .05$.
[2] $p < .001$.

**Table 4.22. — Distribution of nurse graduates by reasons for job choice and clinical area[1]**

| Reasons | Clinical area | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Med/Surg. | | Obstetrics | | Psychiatric | | Pediatric | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 284 | 53 | 35 | 75 | 26 | 81 | 66 | 79 | 455 | 50 |
| Additional learning | 365 | 68 | 23 | 50 | 16 | 50 | 52 | 62 | 526 | 58 |
| Salary | 188 | 35 | 18 | 38 | 16 | 50 | 20 | 33 | 290 | 32 |
| Advancement | 80 | 15 | 6 | 13 | 8 | 25 | 8 | 10 | 120 | 13 |
| Fringes | 130 | 24 | 12 | 26 | 12 | 38 | 22 | 26 | 209 | 23 |
| Favorable working conditions | 239 | 45 | 23 | 50 | 15 | 47 | 37 | 44 | [2]383 | 42 |
| Use education and abilities | 308 | 58 | 30 | 64 | 18 | 56 | 45 | 54 | [2]478 | 52 |
| Only job available | 53 | 10 | 1 | 2 | 3 | 9 | 5 | 6 | 84 | 9 |
| Limited to locality | 90 | 17 | 9 | 19 | 2 | 6 | 11 | 13 | 137 | 15 |
| Needed money | 72 | 13 | 5 | 11 | 3 | 9 | 10 | 12 | 106 | 12 |
| Preparation for other job | 77 | 14 | 6 | 13 | 7 | 22 | 11 | 13 | 120 | 13 |
| Convenient | 148 | 28 | 12 | 26 | 5 | 16 | 23 | 27 | 218 | 24 |

[1] Reasons were not mutually exclusive choices.
[2] $p < .05$.
[3] $p < .001$.

**Table 4.23. — Distribution of nurse graduates by reasons for job choice and worksite[1]**

| Reasons | Worksite | | | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General inpatient unit | | ICU-CCU | | Operating room | | Emergency room | | Nursery lab.-del. | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 215 | 49 | 120 | 75 | 24 | 75 | 26 | 72 | 22 | 81 | 455 | 50 |
| Additional learning | 279 | 63 | 118 | 74 | 17 | 53 | 18 | 72 | 12 | 44 | 526 | 58 |
| Salary | 170 | 39 | 54 | 34 | 11 | 34 | 9 | 25 | 9 | 33 | 290 | 32 |
| Advancement | 70 | 16 | 24 | 15 | 4 | 13 | 1 | 3 | 4 | 15 | 120 | 13 |
| Fringes | 116 | 26 | 39 | 24 | 9 | 28 | 6 | 17 | 6 | 22 | 209 | 23 |
| Favorable working conditions | 198 | 45 | 67 | 42 | 20 | 63 | 14 | 40 | 11 | 41 | 383 | 42 |
| Use education and abilities | 254 | 58 | 98 | 61 | 11 | 34 | 18 | 50 | 16 | 59 | 478 | 52 |
| Only job available | 58 | 13 | 9 | 6 | 2 | 6 | 0 | - | 0 | - | 84 | 9 |
| Limited to locality | 87 | 20 | 16 | 10 | 3 | 10 | 2 | 6 | 6 | 22 | 137 | 15 |
| Needed money | 74 | 18 | 12 | 8 | 2 | 6 | 4 | 11 | 2 | 7 | 106 | 12 |
| Preparation for other job | 67 | 15 | 22 | 14 | 8 | 25 | 5 | 14 | 2 | 7 | 120 | 13 |
| Convenient | 137 | 31 | 31 | 19 | 5 | 16 | 6 | 17 | 7 | 26 | 218 | 24 |

[1] The worksite categories are those in which the largest groups of respondents were employed. Therefore the total of N's in the five categories does not equal the figure in the total column. The figures in the total column have been included for the reader's ease of reference.

**Table 4.24. — Distribution of nurse graduates by reasons for job choice and salary range**

| Reasons | Salary range | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | <$8,000 | | $8,000-$9,999 | | $10,000-$11,999 | | $12,000- and over | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 47 | 32 | 179 | 59 | 172 | 59 | 51 | 65 | [1]455 | 50 |
| Additional learning | 80 | 54 | 195 | 64 | 201 | 68 | 45 | 58 | [1]526 | 58 |
| Salary | 26 | 18 | 79 | 26 | 133 | 45 | 48 | 62 | [1]290 | 32 |
| Advancement | 15 | 10 | 41 | 14 | 51 | 17 | 12 | 15 | [2]120 | 13 |
| Fringes | 23 | 16 | 59 | 20 | 100 | 34 | 25 | 32 | [2]209 | 23 |
| Favorable working conditions | 57 | 39 | 143 | 47 | 148 | 50 | 30 | 38 | [2]383 | 42 |
| Use education and abilities | 64 | 44 | 175 | 58 | 192 | 65 | 43 | 55 | [2]478 | 52 |
| Only job available | 27 | 18 | 29 | 10 | 26 | 9 | 2 | 3 | [2]84 | 9 |
| Limited to locality | 41 | 28 | 50 | 17 | 40 | 14 | 6 | 8 | [2]137 | 15 |
| Needed money | 31 | 21 | 41 | 14 | 27 | 9 | 7 | 9 | [2]106 | 12 |
| Preparation for other job | 22 | 15 | 43 | 14 | 39 | 13 | 14 | 18 | 120 | 13 |
| Convenient | 55 | 37 | 73 | 24 | 72 | 25 | 14 | 18 | [2]218 | 24 |

[1] $p < .01$.
[2] $p < .05$.

**Table 4.25. — Distribution of nurse graduates by reasons for job choice and type of position[1]**

| Reasons | Position | | | | Total | |
|---|---|---|---|---|---|---|
| | Staff nurse | | Head nurse, asst. head nurse or supervisor | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. |
| Clinical choice | 417 | 57 | 30 | 50 | 455 | 50 |
| Additional learning | 486 | 66 | 28 | 47 | 526 | 58 |
| Salary | 266 | 36 | 16 | 27 | 290 | 32 |
| Advancement | 101 | 14 | 15 | 25 | 120 | 13 |
| Fringes | 184 | 25 | 14 | 23 | 209 | 23 |
| Favorable working conditions | 329 | 45 | 32 | 53 | 383 | 42 |
| Use education and abilities | 424 | 58 | 37 | 62 | 478 | 52 |
| Only job available | 75 | 10 | 8 | 13 | 84 | 9 |
| Limited to locality | 126 | 17 | 7 | 12 | 137 | 15 |
| Needed money | 98 | 13 | 5 | 8 | 106 | 12 |
| Preparation for other job | 109 | 15 | 7 | 12 | 120 | 13 |
| Convenient | 198 | 27 | 17 | 28 | 218 | 24 |

[1] The type of position categories are those in which the largest groups of respondents were employed. Therefore the total of N's in the two categories does not necessarily equal the figure in the total column. The figures in the total column have been included for the reader's ease of reference.

**Table 4.26. — Distribution of nurse graduates by motivation for a job change and school type**

| I plan to stay in my current job until I find a job: | School type | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | AD | | Diploma | | Baccalaureate | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 26 | 8 | 37 | 11 | 41 | 17 | [1]104 | 11 |
| with higher salary | 65 | 19 | 50 | 15 | 46 | 19 | 161 | 18 |
| with better working hours | 74 | 22 | 81 | 24 | 70 | 29 | 225 | 25 |
| with chance for advancement | 63 | 18 | 65 | 20 | 65 | 27 | [1]193 | 21 |
| with better working conditions | 48 | 14 | 46 | 14 | 39 | 16 | 133 | 15 |
| in the clinical area I prefer | 59 | 17 | 67 | 20 | 44 | 18 | 170 | 19 |
| with more professional independence | 38 | 11 | 55 | 17 | 77 | 32 | [2]170 | 19 |
| outside of the nursing field | 3 | 1 | 4 | 1 | 3 | 1 | 10 | 1 |
| in a better location | 34 | 10 | 38 | 11 | 26 | 11 | 98 | 11 |
| I do not anticipate changing jobs | 107 | 31 | 107 | 32 | 50 | 21 | [3]264 | 29 |

[1] $p < .05$.
[2] $p < .001$.
[3] $p < .01$.

**Table 4.27. — Distribution of nurse graduates by motivation for a job change and geographic region**

| I plan to stay in my current job until I find a job: | Geographic region | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | North Atlantic | | Midwest | | South | | West | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 34 | 15 | 32 | 10 | 27 | 12 | 11 | 8 | 104 | 11 |
| with higher salary | 48 | 21 | 43 | 14 | 52 | 22 | 18 | 12 | [1]161 | 18 |
| with better working hours | 59 | 26 | 79 | 25 | 58 | 26 | 29 | 20 | 225 | 25 |
| with chance for advancement | 58 | 25 | 52 | 17 | 52 | 23 | 31 | 21 | 193 | 21 |
| with better working conditions | 32 | 14 | 41 | 13 | 42 | 19 | 18 | 12 | 133 | 15 |
| in the clinical area I prefer | 51 | 22 | 59 | 19 | 28 | 12 | 32 | 22 | [2]170 | 19 |
| with more professional independence | 52 | 23 | 64 | 21 | 30 | 13 | 24 | 16 | [2]170 | 19 |
| outside of the nursing field | 5 | 2 | 3 | 1 | 1 | - | 1 | 1 | 10 | 1 |
| in a better location | 30 | 13 | 30 | 10 | 20 | 9 | 18 | 12 | 98 | 11 |
| I do not anticipate changing jobs | 57 | 25 | 92 | 30 | 74 | 33 | 41 | 28 | 264 | 29 |

[1] $p < .01$.
[2] $p < .05$.

**Table 4.28. — Distribution of nurse graduates by motivation for a job change and nomination status**

| I play to stay in my current job until I find a job: | Status | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 35 | 11 | 34 | 11 | 35 | 13 | 104 | 11 |
| with higher salary | 55 | 17 | 56 | 18 | 50 | 18 | 161 | 18 |
| with better working hours | 79 | 24 | 75 | 25 | 71 | 25 | 225 | 25 |
| with chance for advancement | 70 | 21 | 58 | 19 | 65 | 23 | 193 | 21 |
| with better working conditions | 49 | 15 | 44 | 14 | 40 | 14 | 133 | 15 |
| in the clinical area I prefer | 54 | 17 | 54 | 18 | 62 | 22 | 170 | 19 |
| with more professional independence | 64 | 20 | 56 | 18 | 50 | 18 | 170 | 19 |
| outside of the nursing field | 1 | - | 6 | 2 | 3 | 1 | 10 | 1 |
| in a better location | 29 | 9 | 35 | 11 | 34 | 12 | 98 | 11 |
| I do not anticipate changing jobs | 92 | 28 | 94 | 31 | 78 | 28 | 264 | 29 |

**Table 4.29. — Distribution of nurse graduates by motivation for a job change and clinical area[1]**

| I plan to stay in my current job until I find a job: | Clinical area | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Medical/ Surgical | | Obstetrics | | Psychiatric | | Pediatrics | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 74 | 14 | 4 | 9 | 3 | 9 | 12 | 14 | 104 | 11 |
| with higher salary | 99 | 19 | 11 | 23 | 7 | 22 | 13 | 16 | 161 | 18 |
| with better working hours | 144 | 27 | 12 | 26 | 9 | 28 | 36 | 43 | 225 | 25 |
| with chance for advancement | 124 | 23 | 11 | 23 | 6 | 19 | 21 | 25 | 193 | 21 |
| with better working conditions | 92 | 17 | 8 | 17 | 3 | 9 | 12 | 14 | 133 | 15 |
| in the clinical area I prefer | 113 | 21 | 4 | 9 | 5 | 16 | 13 | 16 | 170 | 19 |
| with more professional independence | 112 | 21 | 9 | 19 | 7 | 22 | 23 | 27 | 170 | 19 |
| outside of the nursing field | 7 | 1 | 1 | 2 | 1 | 3 | 0 | - | 10 | 1 |
| in a better location | 74 | 14 | 3 | 6 | 2 | 6 | 5 | 6 | 98 | 11 |
| I do not anticipate changing jobs | 166 | 31 | 16 | 34 | 13 | 41 | 30 | 36 | 264 | 29 |

[1] The clinical area categories are those in which the largest groups of respondents were employed. Therefore the total of N's in the four categories does not necessarily equal the figure in the total column. The figures in the total column have been included for the reader's ease of reference.

**Table 4.30. — Distribution of nurse graduates by motivation for a job change and worksite[1]**

| I plan to stay in my current job until I find a job: | Worksite | | | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | General inpatient unit | | ICU-CCU | | Operating room | | Emergency room | | Nursery lab.-del. | | | |
| | No. | Pct. | No. | Pct. | No. | Pct | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 55 | 12 | 24 | 15 | 6 | 19 | 5 | 14 | 3 | 11 | 104 | 11 |
| with higher salary | 81 | 18 | 29 | 18 | 7 | 22 | 6 | 17 | 5 | 19 | 161 | 18 |
| with better working hours | 132 | 30 | 54 | 34 | 2 | 6 | 6 | 17 | 7 | 26 | 225 | 25 |
| with chance for advancement | 100 | 23 | 36 | 23 | 7 | 22 | 7 | 19 | 4 | 15 | 193 | 21 |
| with better working conditions | 79 | 18 | 23 | 14 | 2 | 6 | 7 | 19 | 5 | 19 | 133 | 15 |
| in the clinical area I prefer | 110 | 25 | 18 | 11 | 4 | 13 | 4 | 11 | 2 | 7 | 170 | 19 |
| with more professional independence | 99 | 22 | 32 | 20 | 6 | 19 | 8 | 22 | 5 | 19 | 170 | 19 |
| outside of the nursing field | 5 | 1 | 4 | 3 | 0 | - | 0 | - | 1 | 4 | 10 | 1 |
| in a better location | 50 | 11 | 26 | 16 | 2 | 6 | 5 | 14 | 0 | - | 98 | 11 |
| I do not anticipate changing jobs | 122 | 28 | 60 | 38 | 12 | 38 | 16 | 44 | 9 | 33 | 264 | 29 |

[1] The worksite categories are those in which the largest groups of respondents were employed. Therefore the total of N's in the five categories does not equal the figure in the total column. The figures in the total column have been included for the reader's ease of reference.

**Table 4.31. — Distribution of nurse graduates by motivation for a job change and type of position[1]**

| I plan to stay in my current job until I find a job: | Position | | | | Total | |
|---|---|---|---|---|---|---|
| | Staff nurse | | Head nurse, asst. head nurse or supervisor | | | |
| | No. | Pct. | No. | Pct | No. | Pct. |
| with more individual status | 95 | 13 | 5 | 8 | 104 | 11 |
| with higher salary | 140 | 19 | 13 | 22 | 161 | 18 |
| with better working hours | 208 | 28 | 11 | 18 | 225 | 25 |
| with chance for advancement | 169 | 23 | 13 | 22 | 193 | 21 |
| with better working conditions | 120 | 16 | 11 | 18 | 133 | 15 |
| in the clinical area I prefer | 154 | 21 | 10 | 17 | 170 | 19 |
| with more professional independence | 159 | 22 | 8 | 13 | 170 | 19 |
| outside of the nursing field | 10 | 1 | 0 | - | 10 | 1 |
| in a better location | 91 | 12 | 7 | 12 | 98 | 11 |
| I do not anticipate changing jobs | 225 | 31 | 27 | 45 | 264 | 29 |

[1] The type of position categories are those in which the largest groups of respondents were employed. Therefore the total of N's in the two categories does not necessarily equal the figure in the total column. The figures in the total column have been included for the reader's ease of reference.

**Table 4.32. — Distribution of nurse graduates by motivation for a job change and salary range**

| I plan to stay in my current job until I find a job: | Salary range | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | <$8,000 | | $8,000-$9,999 | | $10,000-$11,999 | | $12,000 and over | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more individual status | 16 | 11 | 32 | 11 | 40 | 14 | 14 | 18 | [1]104 | 11 |
| with higher salary | 41 | 28 | 65 | 22 | 46 | 16 | 9 | 12 | [2] 161 | 18 |
| with better working hours | 45 | 31 | 81 | 27 | 79 | 27 | 18 | 23 | [2]225 | 25 |
| with chance for advancement | 27 | 18 | 71 | 25 | 72 | 25 | 20 | 26 | [3]193 | 21 |
| with better working conditions | 28 | 19 | 49 | 16 | 42 | 14 | 12 | 15 | [3]133 | 15 |
| in the clinical area I prefer | 44 | 30 | 55 | 18 | 56 | 19 | 15 | 19 | [3]170 | 19 |

**Table 4.32. — Distribution of nurse graduates by motivation for a job change and salary range — Continued**

| I plan to stay in my current job until I find a job: | Salary range | | | | | | | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | $8,000 | | $8,000-$9,999 | | $10,000-$11,999 | | $12,000 and over | | | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| with more professional independence | 24 | 16 | 51 | 17 | 67 | 23 | 26 | 33 | [2]170 | 19 |
| outside of the nursing field | 2 | 1 | 4 | 1 | 4 | 1 | 0 | - | 10 | 1 |
| in a better location | 19 | 13 | 35 | 12 | 34 | 12 | 9 | 12 | 98 | 11 |
| I do not anticipate changing jobs | 40 | 27 | 96 | 32 | 100 | 34 | 23 | 29 | [2]264 | 29 |

[1] $p < .01$.
[2] $p < .001$.
[3] $p < .05$.

**Table 4.33. — Comparison of nurse graduates' mean scores on State Board Test Pool Examinations by first reason given for choosing nursing as a career**

| Reasons | SBTPE | | | | | Total $\bar{X}$ |
|---|---|---|---|---|---|---|
| | Medical | Surgical | Obstetrics | Pediatrics | Psychiatric | |
| Service to others | 564 | 563 | 557 | 556 | 548 | 558 |
| Economic stability | 573 | 571 | 564 | 570 | 569 | 569 |
| Influence of others | 534 | 552 | 543 | 532 | 527 | 538 |
| Prior experience | 569 | 583 | 564 | 554 | 542 | 562 |
| Increase knowledge | 561 | 579 | 570 | 572 | 559 | 568 |
| Substitute for medicine | 581 | 564 | 562 | 579 | 577 | 572 |
| Personal interest/ motivation | 581 | 576 | 564 | 570 | 566 | 571 |

[1] $p < .05$.

**Table 4.34. — Comparison of nurse graduates' mean scores on State Board Test Pool Examinations by prenursing perceptions of the nursing profession**

| Perceptions | SBTPE | | | | |
|---|---|---|---|---|---|
| | Medical | Surgical | Obstetrics | Pediatrics | Psychiatric |
| Helping others | 558 | 557 | 545 | 548 | 538 |
| Dignified profession | 550 | 557 | 559 | 545 | 545 |
| Romantic image | 589 | 585 | 581 | 573 | 578 |
| Realistic | 567 | 582 | 566 | 570 | 550 |
| Hard work | 549 | 543 | 539 | 557 | 548 |
| Doctor's assistant | 585 | 593 | 574 | 571 | 566 |
| Easy work | 588 | 569 | 575 | 538 | 577 |
| Limited professional scope | 570 | 557 | 561 | 569 | 572 |
| No idea, limited, or vague | 576 | 566 | 548 | 563 | 558 |
| Idealistic | 94 | 593 | 595 | 605 | 588 |

[1] $p < .05$.

**Table 4.35. — Comparison of nurse graduates' mean scores on State Board Test Pool Examination by high school rank[1]**

| High school rank | SBTPE scores | | | | |
|---|---|---|---|---|---|
| | Medical | Surgical | Obstetrics | Pediatrics | Psychiatric |
| Top 10 percent | 588 | 586 | 580 | 578 | 575 |
| Top 25 percent | 559 | 555 | 550 | 554 | 542 |
| Top 50 percent | 521 | 528 | 520 | 519 | 516 |
| Lower 50 percent | 520 | 520 | 503 | 486 | 510 |

[1] All differences $p < .01$.

**Table 4.36. — Comparison of nurse graduates' mean scores on State Board Test Pool Examinations by father's occupation**

| Father's occupation | SBTPE | | | | |
|---|---|---|---|---|---|
| | Medical | Surgical | Obstetrics | Pediatrics | Psychiatric |
| Health related | 578 | 561 | 552 | 565 | 572 |
| Non-health related | 565 | 566 | 558 | 558 | 552 |

**Table 4.37. — Comparison of nurse graduates' mean scores on State Board Test Pool Examinations by mother's occupation**

| Mother's occupation | SBTPE | | | | |
|---|---|---|---|---|---|
| | Medical | Surgical | Obstetrics | Pediatrics | Psychiatric |
| Health-related | 573 | 571 | 559 | 563 | 547 |
| Non-health realted | 565 | 564 | 558 | 557 | 553 |

**Table 4.38. — Distribution of nurse graduates by worksite and first reason given for choosing nursing as a career**

| Reasons | Worksite | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outpatient and nonhospital | | General inpatient unit | | Nursery lab.-del. | | ICU/CCU, O.R., E.R., & R.R. | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 22 | 36 | 236 | 49 | 14 | 52 | 104 | 45 |
| Economic stability | 10 | 16 | 64 | 13 | 1 | 4 | 38 | 16 |
| Influence of others | 3 | 5 | 28 | 6 | 1 | 4 | 16 | 7 |
| Prior experience | 3 | 5 | 19 | 4 | 3 | 11 | 14 | 6 |
| Increase knowledge | 1 | 2 | 12 | 3 | 0 | - | 4 | 2 |
| Substitute for medicine | 2 | 3 | 25 | 5 | 0 | - | 10 | 4 |
| Personal interest/motivation | 13 | 21 | 67 | 14 | 3 | 11 | 34 | 15 |

**Table 4.39. — Distribution of nurse graduates by worksite and prenursing perceptions of the nursing profession**

| Perceptions | Worksite | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outpatient and nonhospital | | General inpatient unit | | Nursery lab.-del. | | ICU/CCU, O.R., E.R., and R.R. | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct |
| Helping others | 14 | 23 | 157 | 33 | 5 | 19 | 71 | 31 |
| Dignified profession | 2 | 3 | 45 | 9 | 2 | 7 | 21 | 9 |
| Romantic image | 5 | 8 | 39 | 8 | 3 | 11 | 21 | 9 |
| Realistic | 3 | 5 | 34 | 7 | 2 | 7 | 16 | 7 |
| Hard work | 4 | 7 | 17 | 4 | 0 | - | 14 | 6 |
| Doctor's assistant | 1 | 2 | 27 | 6 | 4 | 15 | 14 | 6 |
| Easy work | 3 | 5 | 8 | 2 | 0 | - | 8 | 3 |
| Limited professional scope | 10 | 16 | 16 | 3 | 0 | - | 5 | 2 |
| No idea, limited, or vague | 3 | 5 | 49 | 10 | 5 | 19 | 16 | 7 |
| Idealistic | 1 | 2 | 23 | 5 | 0 | - | 6 | 3 |

**Table 4.40. — Distribution of nurse graduates by worksite and high school rank**

| High school rank | Worksite | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outpatient and nonhospital | | General inpatient unit | | Nursery lab.-del. | | ICU/CCU, O.R., E.R., and R.R. | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Top 10 percent | 28 | 46 | 224 | 47 | 9 | 33 | 107 | 46 |
| Top 25 percent | 18 | 30 | 162 | 34 | 11 | 41 | 64 | 28 |
| Top 50 percent | 10 | 16 | 68 | 14 | 4 | 15 | 46 | 20 |
| Lower 50 percent | 1 | 2 | 14 | 3 | 0 | - | 10 | 4 |

**Table 4.41. — Distribution of nurse graduates by worksite and father's occupation**

| Father's occupation | Worksite | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outpatient and nonhospital | | General inpatient unit | | Nursery lab.-del. | | ICU/CCU, O.R., E.R., and R.R. | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Health related | 3 | 5 | 27 | 6 | 2 | 7 | 8 | 3 |
| Non-health related | 52 | 85 | 443 | 93 | 24 | 89 | 221 | 95 |

**Table 4.42.— Distribution of nurse graduates by worksite and mother's occupation**

| Mother's occupation | Worksite | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Outpatient and nonhospital | | General inpatient unit | | Nursery lab.-del. | | ICU/CCU, O.R., E.R., and R.R. | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Health related | 5 | 8 | 43 | 9 | 1 | 4 | 2 | 9 |
| Non-health related | 51 | 84 | 417 | 87 | 26 | 96 | 207 | 89 |

**Table 4.43. — Distribution of nurse graduates by position and first reason given for choosing nursing as a career**

| Reasons | Position | | | |
|---|---|---|---|---|
| | Staff | | Supervisory | |
| | No. | Pct. | No. | Pct. |
| Service to others | 361 | 49 | 25 | 42 |
| Economic stability | 103 | 14 | 7 | 12 |
| Influence of others | 42 | 6 | 2 | 3 |
| Prior experience | 35 | 5 | 6 | 10 |
| Increase knowledge | 14 | 2 | 1 | 2 |
| Substitute for medicine | 35 | 5 | 1 | 2 |
| Personal interest/ motivation | 102 | 14 | 13 | 22 |

**Table 4.44. — Distribution of nurse graduates by position and prenursing perceptions of the nursing profession**

| Perceptions | Position | | | |
|---|---|---|---|---|
| | Staff | | Supervisory | |
| | No. | Pct. | No. | Pct. |
| Helping others | 236 | 32 | 11 | 18 |
| Dignified profession | 62 | 8 | 8 | 13 |
| Romantic image | 65 | 9 | 5 | 8 |
| Realistic | 50 | 7 | 8 | 13 |
| Hard work | 33 | 5 | 3 | 5 |
| Doctor's assistant | 46 | 6 | 0 | - |
| Easy work | 13 | 2 | 4 | 7 |
| Limited professional scope | 30 | 4 | 1 | 2 |
| No idea, limited, or vague | 74 | 10 | 2 | 3 |
| Idealistic | 28 | 4 | 2 | 3 |

**Table 4.45. — Distribution of nurse graduates by position and high school rank**

| High school rank | Position | | | |
|---|---|---|---|---|
| | Staff | | Supervisory | |
| | No. | Pct. | No. | Pct. |
| Top 10 percent | 342 | 46 | 25 | 42 |
| Top 25 percent | 237 | 32 | 19 | 32 |
| Top 50 percent | 115 | 16 | 13 | 22 |
| Lower 50 percent | 25 | 3 | 2 | 3 |

**Table 4.46. — Distribution of nurse graduates by position and father's occupation**

| Father's occupation | Position | | | |
|---|---|---|---|---|
| | Staff | | Supervisory | |
| | No. | Pct. | No. | Pct. |
| Health related | 36 | 5 | 3 | 5 |
| Non-health related | 689 | 93 | 54 | 90 |

**Table 4.47. — Distribution of nurse graduates by position and mother's occupation**

| Mother's occupation | Position | | | |
|---|---|---|---|---|
| | Staff | | Supervisory | |
| | No. | Pct. | No. | Pct. |
| Health related | 59 | 8 | 9 | 15 |
| Non-health related | 659 | 89 | 49 | 82 |

**Table 4.48. — Comparison of nurse graduates' mean scores from supervisors on six performance subscales by first reason given for choosing nursing as a career**

| Reasons | Performance subscales | | | | | |
|---|---|---|---|---|---|---|
| | Leadership | Critical Care | Teaching/ Collaboration | Planning/ Evaluation | IPR/ Communications | Professional Development |
| Service to others | 2.91 | 3.09 | 2.76 | 2.96 | 3.11 | 2.76 |
| Economic stability | 2.80 | 2.99 | 2.63 | 2.83 | 3.01 | 2.72 |
| Influence of others | 2.73 | 2.98 | 2.62 | 2.85 | 3.02 | 2.74 |
| Prior experience | 2.78 | 3.02 | 2.57 | 2.78 | 3.10 | 2.79 |
| Increase knowledge | 3.11 | 3.33 | 3.08 | 3.00 | 3.32 | 2.79 |
| Substitute for medicine | 2.96 | 3.26 | 2.88 | 3.07 | 3.23 | 2.81 |
| Personal interest/ motivation | 2.80 | 2.95 | 2.65 | 2.92 | 3.01 | 2.69 |

**Table 4.49. — Comparison of nurse graduates' mean scores from supervisors on six performance subscales by prenursing perceptions of the nursing profession**

| Perceptions | Performance subscales | | | | | |
|---|---|---|---|---|---|---|
| | Leadership | Critical Care | Teaching/ Collaboration | Planning/ Evaluation | IPR/ Communications | Professional Development |
| Helping others | 2.89 | 3.09 | 2.74 | 2.99 | 3.12 | 2.77 |
| Dignified profession | 2.73 | 3.07 | 2.71 | 2.89 | 3.04 | 2.72 |
| Romantic image | 2.88 | 3.03 | 2.67 | 2.90 | 3.08 | 2.79 |
| Realistic | 2.83 | 2.97 | 2.62 | 2.82 | 3.00 | 2.65 |
| Hard work | 2.73 | 2.96 | 2.70 | 2.75 | 3.03 | 2.70 |
| Doctor's assistant | 3.00 | 3.17 | 2.74 | 3.01 | 3.16 | 2.76 |
| Easy work | 2.94 | 3.20 | 2.84 | 2.93 | 3.03 | 2.78 |
| Limited professional scope | 3.03 | 3.07 | 2.95 | 3.02 | 3.16 | 2.78 |
| No idea, limited, or vague | 2.91 | 3.09 | 2.65 | 2.87 | 3.08 | 2.77 |
| Idealistic | 2.70 | 2.90 | 2.75 | 2.88 | 3.06 | 2.65 |

**Table 4.50. — Comparison of nurse graduates mean scores from supervisors on six performance subscales by high school rank**

| High school rank | Performance subscales | | | | | |
|---|---|---|---|---|---|---|
| | Leadership | Critical Care | Teaching/ Collaboration | Planning/ Evaluation | IPR/ Communications | Professional Development |
| Top 10 percent | 2.90 | 3.10 | 2.77 | 2.99 | 3.13 | 2.78 |
| Top 25 percent | 2.84 | 3.03 | 2.69 | 2.88 | 3.04 | 2.73 |
| Top 50 percent | 2.85 | 3.09 | 2.73 | 2.90 | 3.11 | 2.67 |
| Lower 50 percent | 2.64 | 2.88 | 2.49 | 2.67 | 2.90 | 2.70 |

**Table 4.51.— Comparison of nurse graduates' mean scores from supervisors on six performance subscales by father's occupation**

| Father's occupation | Performance subscales | | | | | |
|---|---|---|---|---|---|---|
| | Leadership | Critical Care | Teaching/ Collaboration | Planning/ Evaluation | IPR/ Communications | Professional Development |
| Health related | 2.96 | 2.91 | 2.71 | 2.90 | 3.12 | 2.69 |
| Non-health related | 2.86 | 3.07 | 2.72 | 2.93 | 3.09 | 2.75 |

**Table 4.52. — Comparison of nurse graduates' mean scores from supervisors on six performance subscales by mother's occupation**

| Mother's occupation | Performance subscales | | | | | |
|---|---|---|---|---|---|---|
| | Leadership | Critical Care | Teaching/ Collaboration | Planning/ Evaluation | IPR/ Communications | Professional Development |
| Health related | 2.94 | 3.08 | 2.82 | 3.02 | 3.15 | 2.73 |
| Non-health related | 2.86 | 3.07 | 2.72 | 2.93 | 3.09 | 2.74 |

**Table 4.53. — Distribution of nurse graduates by first-stated future plans and first reason given for choosing nursing as a career**

| Reasons | Future Plans I | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Continue, same area | | Continue, different area | | Continue, nursing education | | Leave nursing temporary or permanent | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Service to others | 166 | 48 | 99 | 47 | 82 | 42 | 12 | 25 |
| Economic stability | 47 | 14 | 35 | 17 | 30 | 15 | 11 | 24 |
| Influence of others | 20 | 6 | 8 | 4 | 13 | 6 | 5 | 11 |
| Prior experience | 23 | 7 | 11 | 5 | 8 | 4 | 3 | 6 |
| Increase knowledge | 9 | 3 | 5 | 2 | 5 | 3 | 0 | - |
| Substitute for medicine | 12 | 3 | 7 | 3 | 17 | 9 | 4 | 9 |
| Personal interest/motivation | 52 | 15 | 29 | 14 | 31 | 16 | 8 | 17 |

**Table 4.54. — Distribution of nurse graduates by first-stated future plans and prenursing perceptions of the nursing profession**

| Perceptions | Future Plans I | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Continue, same area | | Continue, different area | | Continue, nursing education | | Leaving nursing temporary or permanent | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Helping others | 119 | 34 | 61 | 29 | 50 | 25 | 12 | 25 |
| Dignified profession | 33 | 10 | 17 | 8 | 16 | 8 | 2 | 4 |
| Romantic image | 33 | 10 | 18 | 9 | 9 | 5 | 8 | 17 |
| Realistic | 25 | 7 | 17 | 9 | 12 | 6 | 6 | 13 |
| Hard work | 16 | 5 | 10 | 5 | 9 | 5 | 2 | 4 |
| Doctor's assistant | 21 | 6 | 9 | 4 | 12 | 6 | 3 | 6 |
| Easy work | 4 | 1 | 7 | 3 | 7 | 4 | 1 | 2 |
| Limited professional scope | 10 | 3 | 9 | 4 | 15 | 8 | 0 | - |
| No idea, limited, or vague | 28 | 8 | 21 | 10 | 23 | 12 | 6 | 13 |
| Idealistic | 13 | 4 | 9 | 4 | 11 | 6 | 2 | 4 |

**Table 4.55. — Distribution of nurse graduates by first-stated future plans and high school rank**

| High School rank | Future plans I | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Continue, same area | | Continue, different area | | Continue, nursing education | | Leave nursing temporary or permanent | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Top 10 percent | 157 | 45 | 96 | 45 | 93 | 47 | 23 | 49 |
| Top 25 percent | 115 | 23 | 67 | 32 | 60 | 31 | 12 | 26 |
| Top 50 percent | 55 | 16 | 39 | 18 | 27 | 14 | 7 | 15 |
| Lower 50 percent | 12 | 4 | 4 | 2 | 10 | 5 | 1 | 2 |

**Table 4.56. — Distribution of nurse graduates by first-stated future plans and father's occupation**

| Father's occupation | Future Plans I | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Continue, same area | | Continue, different area | | Continue, nursing education | | Leave nursing temporary or permanent | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Health related | 14 | 4 | 15 | 7 | 9 | 5 | 3 | 6 |
| Non-health related | 327 | 94 | 192 | 91 | 182 | 92 | 42 | 89 |

**Table 4.57. — Distribution of nurse graduates by first-stated future plans and mother's occupation**

| Mother's occupation | Future Plans I | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Continue, same area | | Continue, different area | | Continue, nursing education | | Leave nursing temporary or permanent | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Health related | 28 | 8 | 20 | 9 | 16 | 8 | 6 | 13 |
| Non-health related | 311 | 89 | 185 | 87 | 172 | 87 | 40 | 85 |

**Table 4-58. — Distribution of nurse graduates by professional reading patterns and nomination status: read publications cover to cover**

| Publication | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| *American Journal of Nursing* | 50 | 15 | 48 | 16 | 40 | 14 | 138 | 15 |
| *Nursing 76* | 117 | 36 | 100 | 33 | 78 | 28 | 295 | 32 |
| *RN* | 50 | 15 | 49 | 16 | 45 | 16 | 144 | 16 |
| Special area journal | 29 | 9 | 20 | 7 | 15 | 5 | 64 | 7 |
| "Cover to cover per capita readership index" | | .75 | | .71 | | .63 | | .70 |

**Table 4.59. – Distribution of nurse graduates by professional reading patterns and nomination status: scan entire publication**

| Publication | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| *American Journal of Nursing* | 66 | 20 | 55 | 18 | 54 | 19 | 175 | 19 |
| *Nursing 76* | 53 | 16 | 39 | 13 | 44 | 16 | 147 | 15 |
| *RN* | 44 | 14 | 42 | 14 | 41 | 15 | 127 | 14 |
| Special area journal | 11 | 3 | 15 | 5 | 3 | 1 | 29 | 3 |
| Per capita "scan readership index" | | .53 | | .49 | | .51 | | .52 |

**Table 4.60. Distribution of nurse graduates by professional reading patterns and nomination status: read articles of interest**

| Publication | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| *American Journal of Nursing* | 168 | 51 | 157 | 51 | 130 | 46 | 455 | 50 |
| *Nursing 76* | 118 | 36 | 94 | 31 | 108 | 38 | 320 | 35 |
| *RN* | 89 | 27 | 88 | 29 | 71 | 25 | 248 | 27 |
| Special area journals | 39 | 12 | 29 | 10 | 21 | 8 | 89 | 10 |
| Per capita "article of interest readership index" | | 1.27 | | 1.20 | | 1.17 | | 1.21 |

**Table 4.61. — Distribution of nurse graduates by professional presentations/publications and nomination status**

| Activity | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Given workshop(s) | 35 | 11 | 20 | 7 | 24 | 9 | 79 | 9 |
| Given speech(es) | 20 | 6 | 12 | 4 | 7 | 3 | 39 | 4 |
| Written article(s) | 3 | 1 | 6 | 2 | 2 | 1 | 11 | 1 |
| Per capita "contribution index" | | .20 | | .13 | | .12 | | .14 |

**Table 4.62. — Distribution of nursing graduates by professional organization membership and nomination status**

| Organization | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| American Nurses' Association | 86 | 26 | 55 | 18 | 47 | 17 | 188 | 21 |
| Special area organization | 20 | 6 | 19 | 6 | 10 | 4 | 49 | 5 |
| Nursing honor society | 13 | 4 | 15 | 5 | 3 | 1 | 31 | 3 |
| Alumni association | 13 | 4 | 8 | 3 | 8 | 3 | 29 | 3 |
| Per capita "membership index" | | .40 | | .32 | | .24 | | .32 |

**Table 4.63. — Distribution of nurse graduates by type of participation in professional organizations and nomination status**

| Nature of participation | Nomination status | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Most promising | | Promising | | Nonselected | | Total | |
| | No. | Pct. | No. | Pct. | No. | Pct. | No. | Pct. |
| Attend meetings | 72 | 22 | 57 | 19 | 45 | 16 | 174 | 19 |
| Hold office | 7 | 2 | 6 | 2 | 2 | 1 | 15 | 2 |

**Table 4.64. — Nurse graduates' evaluation of school preparation: AD, diploma, and baccalaureate graduates**

| Performance subscale | $\bar{X}$ for AD's | $\bar{X}$ for Diplomas | $\bar{X}$ for Baccalaureates | p |
|---|---|---|---|---|
| Leadership | 2.91 | 3.30 | 2.96 | <.01 |
| Critical Care | 2.83 | 3.25 | 2.71 | < .01 |
| Teaching/Collaboration | 2.90 | 3.20 | 3.17 | <.01 |
| Planning/Evaluation | 3.29 | 3.53 | 3.39 | < .01 |
| IPR/Communications | 3.26 | 3.50 | 3.35 | < .01 |

**Table 4.65. — Nurse graduates' evaluation of school preparation: most promising, promising, and nonselected graduates**

| Performance subscale | $\bar{X}$ for most promising | $\bar{X}$ for promising | $\bar{X}$ for nonselected | p |
|---|---|---|---|---|
| Leadership | 3.05 | 3.11 | 3.06 | [1]ns |
| Critical Care | 2.93 | 3.00 | 2.95 | ns |
| Teaching/Collaboration | 3.09 | 3.09 | 3.07 | ns |
| Planning/Evaluation | 3.41 | 3.41 | 3.40 | ns |
| IPR/Communications | 3.39 | 3.40 | 3.33 | ns |

[1] Not significant.

**Table 4.66. — Correlations between nurse graduates' perceptions of the quality of their preparation for nursing and the employers' evaluations of nursing performance of those graduates: AD, diploma, and baccalaureate graduates**

| Performance subscales | Zero-order r's | | | Total |
|---|---|---|---|---|
| | AD | Diploma | Baccalaureate | |
| Leadership | .092 | [1].114 | .051 | [1].079 |
| Critical Care | [2].266 | .080 | -.067 | [2].116 |
| Teaching/Collaboration | [2].297 | .094 | .023 | [2].169 |
| Planning/Evaluation | [2].240 | [1].116 | .025 | [2].153 |
| IPR/Communications | [3].177 | .070 | .027 | [3].095 |

[1] $p < .05$.
[2] $p < .001$.
[3] $p < .01$.

**Table 4.67. — Correlations between nurse graduates' perceptions of the quality of their preparation for nursing and the employers' evaluations of those graduates: most promising, promising, and nonselected graduates**

| Performance subscales | Zero-order r's | | | Total graduates |
|---|---|---|---|---|
| | Most promising | Promising | Nonselected | |
| Leadership | .055 | .003 | [1].168 | [2].079 |
| Critical Care | [1].158 | [2].119 | .075 | [3].116 |
| Teaching/Collaboration | [2].117 | .060 | [3].319 | [3].169 |
| Planning/Evaluation | .097 | [2].158 | [3].212 | [3].153 |
| IPR/Communications | .026 | .091 | [2].149 | [1].095 |

[1] $p < .01$.
[2] $p < .05$.
[3] $p < .001$.

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